

THE DETERMINATION OF SOME FACTORS INFLUENCING CHANNEL CHANGE IN  
THE AGRICULTURAL MACHINERY SECTOR

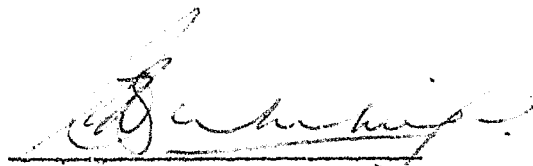
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DECLARATION

I, Dick Brownlee Cumming, do hereby declare that this research report entitled "The Determination of Some Factors Influencing Channel Change in the Agricultural Machinery Sector" is my own unaided work. I further declare that this research report or any part of it has not been submitted in the past or is being or is to be submitted for a degree at any other university. The information used in this report has been obtained by me with the support of Massey Ferguson (S.A.) Ltd.

  
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ABSTRACT

This report reviews some of the literature on marketing channels, the relationships that exist within them and their management under various marketing strategies. The literature suggests that as distribution strategies tend towards exclusive dealing, that is, where dealers are given exclusive rights to distribute the manufacturer's products, the manufacturer can expect better customer service and a more aggressive selling effort.

Two types of channels are used by Slattery (Ltd.), a South African manufacturer of maize harvesting machinery. These are agricultural co-operatives and tractor dealerships and this report examines these two types of channels with regard to the customer service and selling effort that they provide in the Western Transvaal. A survey of a sample of owners of the machinery and a survey of a sample of the intermediaries that sell it provide results which suggest that in several aspects there is no significant difference between the two types of intermediary.

Under the heading of "service aspects", there is a broad similarity between the financial terms offered customers, but some co-ops do have an advantage in that improved credit facilities are available at some branches. The high proportion of owners who pay for their purchases within the first season would suggest that credit facilities are not as important for tractor drawn combines as for other types of capital equipment, like tractors. No difference was found in the repair and maintenance facilities offered or the repairs and maintenance carried out. Dealers had a higher proportion of factory-trained staff — but the service staff of co-ops received a higher rating from owners of the machinery than did the dealer staff. Co-ops had better parts availability, and parts were more competitively priced, but no differences were found in the sellers' willingness to make customer calls and in the instructions given during installation of new machinery.

Under the heading of "selling effort" no differences were found between the two channel types with respect to display of machinery, advertising and availability of display materials — however these factors were considered to be of little consequence. No differences were found in the willingness to carry stocks of new machines and to carry out demonstrations, although there was a suggestion that dealers were more active in this regard. The biggest difference to be found

was in the area of sales staff activity. Dealers appeared to be far more aggressive in their selling effort. Market share is being lost at some co-ops due to lack of commitment by co-op staff.

The implications of the findings are discussed and recommendations are made.

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## 1. INTRODUCTION

A topic covered by most marketing texts is that of the relationships that exist in a marketing channel - that is, the particular configuration of intermediaries that link the final customer to the manufacturer. The nature of this enquiry is to examine two aspects of that relationship, namely customer service and selling effort, that exist in two channels used by a South African manufacturer of maize harvesting machinery in the Western Transvaal. The purpose of the report is to evaluate differences in service and selling effort with a view to making suggestions with regard to future marketing strategies in the light of potential threats that face the company.

## 2. LITERATURE REVIEW

### 2.1 The Need for Distribution Intermediaries

Few manufacturers sell their goods directly to the final users. Between the manufacturer and end user there stand varying numbers of middlemen who perform a variety of tasks of the marketing process and who bear various names. A particular configuration of middlemen is known as a channel. Kotler (1) points out that the channel chosen by a manufacturer has far reaching effects upon other marketing decisions. It is further pointed out that a channel decision involves a long term commitment to other firms. Thus the choice of a channel must be done with care and with an eye to the future.

Dodge (2) proposes a list of the more significant reasons for using middlemen channels in industrial marketing:

- 1) The manufacturer does not have to make a large, long term financial commitment. Even small manufacturers have access to national and international markets using middlemen.
- 2) The middleman's knowledge and experience of a particular area or group of consumers are available to the manufacturers.
- 3) The middleman's prestige may be greater than the manufacturer's.
- 4) The manufacturer can gain access to a segment that is otherwise denied him because of buyer preferences.
- 5) Certain geographical areas may not warrant direct sales.
- 6) Other reasons (e.g. financial and image commitment) may militate against direct sales.

### 2.2 Selection of Distribution Intermediaries

There are two broad categories of middlemen. The Merchant middlemen such as wholesalers and retailers buy, take title to and then resell the merchandise. Agent middlemen such as brokers, manufacturer's representatives, and sales agents - do not take title to the merchandise, they negotiate on behalf of the manufacturer. Kotler (1) points out that in practise the choice of markets and the choice of channels may be interdependent. Furthermore, channel determination is dependent on customer, product, middleman, competitive company and environmental characteristics. Van der Merwe and Van der Merwe (3) state that the

directness of the channel will depend on the characteristics of the product, the customer market, the manufacturer and the middlemen available. Stanton (4) proposes a further set of factors affecting choice of middlemen for industrial products:

- 1) The middleman's access to the market.
- 2) The location of the middleman.
- 3) Product policies of wholesalers and retailers. (The manufacturer will normally seek outlets where his line will complement rather than compete with the re-seller's other products.)
- 4) Promotion policies of the manufacturer and the middleman.
- 5) Customer services available.
- 6) Physical plant and equipment.
- 7) Financial condition of the middleman and the financial facilities provided for customers and suppliers.
- 8) Quality of management.

When the producer evaluates the alternative channels, his problem is to decide which alternative best satisfies the long run objectives of his firm. To do this Kotler (1) suggests that he must measure the alternatives against economic, control and adaptive criteria. Since the firm is pursuing profits, the economic criteria are the most important.

Dodge (2) suggests that the overriding consideration in selecting both channels and outlets is the desired extent of "coverage", or market exposure of the product.

### 2.3 Degrees of Market Exposure

Three degrees of market exposure are described in the literature.

2.3.1 Intensive Distribution is a policy whereby the product is stocked in as many outlets as possible, where the dominant factor is their place utility - e.g. cigarettes. This form maximises brand exposure and convenience to customers.

2.3.2 Exclusive Distribution is a policy whereby dealers are granted exclusive rights to distribute this company's products in their respective territories. This form of market exposure often

accompanies an agreement between manufacturer and dealer whereby the dealer will not carry competing lines - known as exclusive dealing. A product's exposure is limited by an exclusive distribution policy, but in return the manufacturer expects a more aggressive selling effort from the dealer, and he also expects to be able to exercise more direct control over intermediaries, price, promotion, credit and service policies. Exclusive distribution also tends to enhance the prestige and image of the product and allow higher mark-ups.

2.3.3 Selective Distribution is an intermediate arrangement between intensive distribution and exclusive distribution. It involves the use of more than one but less than all of the intermediaries who are willing to carry a particular product. Dodge (2) notes that this type of coverage plan is used when it is not conceivable from a marketing standpoint to use exclusive distribution or it is not economical to sell to everyone. The basis for selective distribution is a distribution cost analysis by customer. The objective is to determine the minimum sales volume necessary for an outlet to be regarded as profitable. Other criteria that might be relied upon in selecting outlets include:

- 1) a willingness to stock a representative inventory;
- 2) quality and adequacy of service facilities;
- 3) the competence of the sales staff;
- 4) the financial health of the company;
- 5) the territory covered.

Hansen (5) notes that the basic purpose of selective distribution is to provide each seller with sufficient sales and profit potential to induce him to aggressively re-sell the product. This selector expects some kind of special effort from the selectee in return for giving him something of value -- namely a franchise to sell the manufacturer's products. If a reseller handles competing lines the selling effort will often be less aggressive than if only the one line were kept.

According to Hill et al. (6) the most serious drawback to selective distribution is that "the manufacturer puts all his marketing eggs in one or two baskets" in each area. A distributor might appear to be

satisfactory on first analysis, but in practise his performance may leave much to be desired. By the time this is discovered the manufacturer is landed with him. It is not often possible to get the best distributor in every market. In some areas the manufacturer must be regarded as a "special prize" to be able to get a good distributor. The excellence of the distributor in an area governs to a large degree the quality of a manufacturer's marketing performance. Hill et al. (6) go on to note that a higher quality of marketing effort by selected middlemen stems from the spirit of co-operation of common interest which supports it. This higher quality of marketing effort manifests itself as a greater willingness to carry adequate and representative stocks, greater co-operation in promotional programs and greater willingness to provide the necessary services.

#### 2.4. Attraction of Distribution Intermediaries

The offer of an opportunity to make a profit is the way manufacturers attract potential channel members. Furthermore, resellers are usually offered a continuing relationship that promises to produce a regular flow of profits. To make profits on this basis the product for re-sale should be in strong demand and therefore may be sold in quantity at a price well above cost. Oxenfeldt (7) states that such opportunities exist when the following conditions are met:

- 1) The product itself has special merit - for a segment of the market at least.
- 2) Brand preference has been created by the manufacturer. Customers will purchase it in preference to other brands.
- 3) The intensity of price competition is not such as to make profits unattractive.

#### 2.5 Customer Service

For products requiring specialised sales, installation and repair services, adequate service skills and facilities constitute important prerequisites for middlemen handling them. It is not often possible to delegate the responsibility for servicing to distributors or dealers without ensuring that provisions for training and controlling their

activities are adequate. Matthews et al.(8) point out that a major function of many franchise and exclusive agency systems is the co-ordination and quality control of product services. They indicate that in extreme cases where existing channels may be unwilling or unable to provide service, manufacturers may be forced to sell direct or to utilize unorthodox channels. By the same token, they say, distributors and dealers are entitled to expect adequate compensation for carrying out the servicing functions. This influences their decision to handle the product or not.

Hill et al.(6) argue that in a strategic sense the definition of service is "any activity undertaken for the express purpose of aiding customers." They say that although this may sound nebulous, it excludes such activities such as frequent sales calls, local availability of inventories and warranties. These functions are seldom undertaken expressly for the purpose of helping the customer. What does fit into this concept, they argue, are such activities as pre-sale engineering studies, technical consultation and performance testing, in addition to post-sale assistance such as finance, training of operators, installation and maintenance. Despite the expense which is incurred, and the abuse which it attracts, they point out that customer service is a core element in the strategic plan.

Dodge (2) notes that whereas service is important in the marketing of consumer goods, it is indispensible in industrial marketing. He lists the four aspects of before-sales servicing as:

- 1) installation;
- 2) assistance in getting the operation started;
- 3) on-site field demonstrations ;
- 4) instruction on operation and maintenance.

He argues that since after-sales service is corrective in nature, it thus has negative connotations. Because of this, and the fact that customer satisfaction and continued patronage frequently rely on after-sales service he says that repair and maintenance programs must be planned with a great deal of care, taking customer requirements, competitive implications and cost into consideration.

Dodge (2) quotes the following guidelines for controlling before and after-sales service:

- 1) Customer service should be related to the firm's primary objective of providing quality products.
- 2) The adequacy of customer service should be such that the customer obtains the maximum product satisfaction.
- 3) Customer service should be directly supporting or related to the use of the product.
- 4) The cost of customer service which is more than the minimum required must be related to the value of the account.
- 5) Customer service should satisfy a real need.

## 2.6 Management of Distribution Intermediaries

### 2.6.1 Responsibilities of channel members

As the degree of market exposure tends towards exclusive distribution, the tasks of the channel members become sharply defined and specific agreements about the degrees of participation in the marketing tasks become necessary. Each of these agreements requires careful negotiation over rights and obligations. Stern and El-Ansary (9) lay down a list of bargaining points (and relevant trade-offs) that are concerned in an exclusive distribution arrangement:

- 1) Products covered.
- 2) Classes or types of customers.
- 3) Territory covered.
- 4) Inventories..
- 5) Installation and repair services.
- 6) Prices.
- 7) Sales quotas.
- 8) Advertising and sales promotional obligations.
- 9) Exclusive dealing.
- 10) Duration and provision for renewal and termination.

Hill et al.(6) list the areas of agreement between manufacturer and middleman as:

- 1) Decision rules on how the manufacturer will handle direct sales to large customers - ("house accounts").
- 2) How much inventory distributors are expected to carry.

- 3) How much protection the manufacturer will afford the middleman on the prices of his stock in case of price reductions and also on the limitations of other dealerships.
- 4) The amount of compensation offered.
- 5) The amount of marketing assistance that will be given and the feedback required.

Kotler (1) refers to such agreements as a "trade relations mix", the main elements of which are price policies, conditions of sale, territorial rights and the specific services to be performed by each party.

#### 2.6.2 Control of channel members

The motivation and control of middlemen by a manufacturer is often extremely difficult in view of the fact that middlemen have conflicting policies and problems. Many of the policies adopted by manufacturers are determined by what Rachman (10) terms the "balance of power" between buyer and seller. He states that a manufacturer has a choice of three policies; either he can follow the dictates of the particular middleman, or he may adopt a leadership position, or he may settle for a balanced relationship between the two extremes. Stanton (4) notes that much of the literature is one-sided because it suggests that it is the manufacturer who decides on type of outlet, number of outlets and even selection of individual outlets. He points out that in fact it is the middleman in a great many cases who has considerable freedom and power to make his own choices in the establishment of channels for products. El-Ansary and Robicheaux (11) discuss authority and power in human behaviour terms. They refer to the power scopes for the manufacturer as being different to those of the middlemen. As an example they suggest that while the manufacturer may have power over physical product quality and prices, the middleman may have power over inventory and service levels to the final consumer. In effect, both members may exercise some control - but in different fields.

#### 2.7 Channel Conflict

Channel conflict describes the existence of opposing interests between different levels in the same channels. It arises, according to Kotler (1)

because of differences in goals, roles, perceptions and power. He advocates that a certain amount of channel conflict is healthy - and so it should be managed better rather than eliminated. Rachman (10) regards the difference in attitude towards the products sold by the manufacturer as being one of the major conflicts a manufacturer may have with a retailer. Dodge (2) illustrates channel conflict by listing a series of criticisms of middlemen by manufacturers:

- 1) Middlemen just take orders - they do not try to sell.
- 2) Sales are lost because middlemen lack the flexibility of a manufacturer's own salesmen.
- 3) Middlemen cannot be expected to devote adequate selling effort to only one manufacturer's product or customers.
- 4) Middlemen show reluctance to actively seek new customers.
- 5) Middlemen expect the customer to have the product knowledge.
- 6) Adequate inventory is not stocked at all times.
- 7) Middlemen repeatedly ignore manufacturer - sponsored programs.

### 2.8 Channel Change

Evaluation of the performance of a producer's middlemen must be carried out on an ongoing basis. Where the performance of a channel member is badly below standard, the underlying causes should be considered and suitable remedies sought. Often the producer has to tolerate sub-standard performance from a middleman because to drop or replace the middleman would lead to more disastrous results. Where suitable alternatives exist, the producer should make an ultimatum about the level of performance, failing which the channel will be dropped. Kotler (1) states that if performance standards and sanctions are agreed upon at the commencement of a producer-middleman relationship much of the anguish can be avoided. He highlights some areas where explicit agreements should be reached:

- 1) Sales intensity and coverage.
- 2) Average inventory levels.
- 3) Customer delivery time.
- 4) Treatment of damaged and lost goods.
- 5) Co-operation in company training and promotional programs.

6) Services owed to customers by middlemen.

There are other reasons why firms should change their channels. Rachman (10) notes that firms are always in a state of change with regard to their choice of marketing channels due to the changing consumer, population shifts, new products and changes in transportation systems. Hansen (5) lists four considerations a manager should have when appraising new channels:

- 1) The extent to which the development better serves consumer needs.
- 2) The composition of the customers at the new outlets.
- 3) The extent of development of the new channel type.
- 4) The ability of the old type of outlet to survive or adjust to manner of doing business.

Kotler (1) distinguishes three levels of channel change decisions:

- 1) Adding or dropping individual channel members.
- 2) Adding or dropping particular marketing channels.
- 3) Developing a totally new way to sell goods in all markets.

He suggests that the decision to add or drop particular middlemen requires a straightforward incremental analysis.

### 3. BACKGROUND TO THE REPORT

#### 3.1 Slattery (Pty) Ltd

Slattery (Pty) Ltd. is a wholly-owned subsidiary of Massey-Ferguson Ltd. and is a manufacturing firm located in Potgietersrus engaged in the production of maize-and groundnut-harvesting machinery as well as other types of agricultural implements. Prior to its take-over by Massey-Ferguson, Slattery had been privately-owned, and marketed its products through farmer's co-operatives and Ford Tractor dealerships. After the take-over by Massey-Ferguson, Slattery products were marketed through Massey-Ferguson dealerships as well.

#### 3.2 Dealership Agreements

Two types of contract define the association between Slattery and their tractor dealer and co-operative intermediaries - namely "exclusive" and "non-exclusive" dealership agreements. The result is that an area may be served by a single (exclusive) dealership or by two or more (non-exclusive) dealerships handling the same Slattery products in competition with one another. In 1977 Slattery sold its products through seven co-operatives operating sixty seven branches, and twenty five Massey-Ferguson dealerships operating sixty five branches. Not all of the Massey-Ferguson and Ford Tractor branches were able to carry Slattery products in view of the fact that they were precluded from doing so by exclusive dealership agreements between Slattery and the co-operatives in their particular areas.

The tractor dealerships and the co-operatives have enjoyed equal trading terms when dealing with Slattery. They operate as merchant middlemen in that they take title to the goods that they purchase for re-sale.

#### 3.3 Maize Harvesting Machinery

The development and growth of Slattery was largely due to the development and production of tractor-drawn harvesting machinery. Built expressly for South African conditions, this machinery has dominated the

South African market for tractor-drawn maize combines. Combine sales are closely correlated to the size of the maize harvest.

#### 3.4 Farmers' Co-operatives

The farmers' co-operatives represent a powerful influence in the market place for inputs of agricultural production in South Africa since they represent the combined buying power of their many farmer-members. The last decade has seen the co-operative movement enter the manufacturing field.

The procuring and manufacturing company of V.E.T.S.A.K. is owned by South African farmers' co-operatives and is engaged in the assembly and manufacture of a wide range of agricultural tractors and implements - including the L.M. implement range which includes a maize combine. Products manufactured by V.E.T.S.A.K. are marketed through farmers' co-operatives.

#### 3.5 Rationalization of Marketing Channels

At the time of take-over by Massey-Ferguson, Slattery marketed some of its production through Ford Tractor dealerships, but the bulk of its sales were made to farmers' co-operatives, (hereafter referred to as "co-ops".) After consolidation a new set of marketing intermediaries, namely Massey-Ferguson dealerships, became available for the distribution of Slattery products. However, Slattery chose to concentrate on its association with the co-ops in view of the fact that the bulk of its sales were made to them. The co-ops were ideal customers in that there were only a few of them and they gave very large orders, and enjoyed the loyalty of a very large membership. Slattery entered into non-exclusive dealership agreements with Massey-Ferguson dealers where the local co-op did not insist on holding the exclusive franchise. The following table illustrates the sales distribution of Slattery (Ltd) for 1977 :

Table 1 : Sales Distribution of Slattery Ltd. for 1977

	Sales	%
Co-ops	R 2,103,200	55,8
Ford Tractor dealerships	501,100	13,3
Massey-Ferguson dealerships	1,163,800	30,9

### 3.6 Strategic Implications

The above table indicates the importance of the co-ops to Slattery. However there are certain issues which pose latent threats to Slattery as a result of their dependence on co-operatives to buy over half of their production.

#### 3.6.1 Competition from L.M. Combines

As previously mentioned, the co-ops are shareholders in V.E.T.S.A.K. and hence have a vested interest in L.M. combines. Despite the fact that co-ops are supposed to supply the requirements of their members on an impartial basis it is logical to assume that products sold in direct competition with their own will not enjoy the same degree of selling effort in all cases. Slattery thus faces the threat of strong competition from L.M. due to unequal sales effort at the co-ops.

#### 3.6.2 The Power of the Co-ops

Due to the buying power of the co-ops a very real threat exists whereby the co-ops are in a strong position to dictate terms to Slattery, and could quite conceivably "squeeze" Slattery on prices.

#### 3.6.3 Dealer Loyalty

Massey-Ferguson dealers (hereafter referred to simply as "dealers") presently handle Massey-Ferguson tractors, self-propelled combines and implements as well as the "Safim" implement range. Dealer loyalty to Massey-Ferguson could be impaired by giving Slattery product dealerships to co-ops either (a) on an exclusive basis - denying the dealer a lucrative line to complement his range; or (b) on a non-exclusive basis leading to reduced income for the dealer through price cutting and reduced sales due to competition in the same area.

### 3.7 Pros and Cons of Channel Change

The three factors mentioned, that is the threat of diminished selling effort in favour of L.M. combines at the co-ops, the channel dominance by the co-ops and the threat of dealer loyalty favour the consideration of divestment of the co-ops as marketing intermediaries for Slattery.

Setting off against this argument for divestment of co-ops are

the facts that the co-ops account for more than half of Slattery's sales, and that they enjoy considerable loyalty from their members, which account for the vast majority of the South African farmers. A very great perceived threat is that if Slattery were to do away with the co-ops as intermediaries, sales would be lost in favour of L.M. combines. It is argued that this would occur because many farmers are more loyal to their co-op than they are to Slattery combines. A further argument against divestment is the one that co-ops are able to offer more attractive financial terms to purchasers of machinery and that this could not be matched by dealers. Slattery sales would thus be lost to L.M.

Some of the arguments put forward by those favouring the marketing of Slattery products through dealers are as follows:

#### 3.7.1 Selling Effort

Since dealers handle fewer lines than co-ops, their selling effort is more aggressive. It is claimed that the more determined selling effort that is made by dealers will counteract any tendency for Slattery's sales to drop after they have been withdrawn from the co-ops. It is claimed that co-ops carry too many products and their sales personnel are indifferent to the lines that are carried, and hence are not in a position to canvass for any particular brand. They merely supply what is requested by their members. Another argument says that the co-ops actively push their own products at the expense of competing lines.

#### 3.7.2 Specialised Service

Massey-Ferguson dealers can offer more specialised service in the form of specialist staff and repair and maintenance facilities. The co-ops are involved with the repair and servicing of so many types of machinery that they cannot supply specialist service for any one particular line.

#### 4. PURPOSE OF THE REPORT

##### 4.1 Comparison of Marketing Intermediaries

The review of literature has outlined various aspects of the relationship between the manufacturer and the marketing intermediaries that it chooses to use when employing exclusive and selective distribution strategies. The review also includes a discussion of the various aspects of the middleman - customer relationship that are the components of customer service. This report seeks to compare the various functions that are performed by the co-ops and dealers which are used by Slattery in the Western Transvaal to determine whether there are meaningful differences in their performance as marketing intermediaries according to the theoretical model. More specifically this report sets out to test two hypotheses :

4.1.1 That co-ops and dealers that handle Slattery combines in the Western Transvaal give equal levels of service to their customers with regard to:

- (i) financial terms offered;
- (ii) financial terms utilized;
- (iii) repair and maintenance facilities and staff available;
- (iv) the repair and maintenance of machinery;
- (v) the response to requests to make service calls;
- (vi) the adequacy of installation and instruction in the use of new machinery;
- (vii) the availability of spare parts.

4.1.2 That co-ops and dealers that handle Slattery combines in the Western Transvaal are equally aggressive in their marketing effort with regard to:

- (i) carrying representative stock;
- (ii) demonstration of machinery;
- (iii) display of machinery,
- (iv) sales staff activity;
- (v) advertising;
- (vi) availability of display materials.

The report will discuss findings and make recommendations with regard to suggested improvements that could be made in the area of customer service and product distribution.

## 5. METHODOLOGY

### 5.1 Owner Survey

A structured questionnaire was drawn up and administered to two groups of farmers in the Western Transvaal. The one group had purchased their Slattery combines from their local co-op, and the other group had purchased their combines from Massey-Ferguson dealerships.

The questionnaire was produced in English and Afrikaans and was constructed in such a way as to require the minimum of written response. The final draft of the questionnaire was produced after a pilot study was conducted using an interim version of the questionnaire.

The bulk of the questions required the respondent to mark one or more boxes corresponding to the most appropriate answer. Copies of the questionnaires are appended. Most of the questionnaires were filled in during face-to-face interviews on the respondents' farms. A few questionnaires were completed by respondents who were not available for interview at the time of the interviewer's visit. The questionnaires were returned in self-addressed envelopes.

### 5.2 Dealer and Co-op Survey

The management of five dealerships and eight branches of co-ops in the Western Transvaal were interviewed using a structured questionnaire which asked mostly open-ended questions. The questionnaire is discussed in a later section.

### 5.3 Choice of Area

The Western Transvaal was chosen because:

- a) It is a large maize-producing area and as such has a large population of maize farmers and maize harvesting machinery.
- b) According to a survey carried out by the Division of Agricultural Production Economics of the Department of Agricultural Economics and Marketing, this region has had the highest percentage of farmers who still harvest their maize crop by hand of the three major maize producing regions of South Africa. Questions concerning this group of maize producers are of interest to Massey-Ferguson (S.A.) Ltd. as described in 7.2.

#### 5.4 Sampling Technique

Five Massey-Ferguson dealerships authorised to sell Slattery combines in the Western Transvaal were selected for interview on the basis of their geographical location. They were located in Schweitzer-Reinecke, Wolmaranstad, Hartbeesfontein, Ventersdorp and Koster. The co-ops were selected for interview by virtue of the fact that they operated in the same town as the Massey-Ferguson dealership or in towns within the region spanned by the dealerships. They were located in Schweitzer-Reinecke, Wolmaranstad, Ottosdal (two co-ops), Hartbeesfontein, Klerksdorp, Coligny and Lichtenburg. The sampling fraction of the dealerships was eight out of thirty eight.

The sample of farmers was arrived at by obtaining a list of Slattery customers from the sample of dealers and co-ops. In addition to these, other Slattery owners were called on having been referred to by the farmers visited. This was done to increase the sample size and to attempt to overcome an element of bias which will be discussed below. In all over eighty farms were visited, but in many cases the visits were abortive because the farmer was unavailable for interview. The fact that the Easter school holidays were in progress was largely responsible for this. However the timing of the gathering of data was unavoidable in view of the time restraints imposed upon the project. A final sample of 22 dealer customers and 31 co-op customers was obtained.

The choice of dealers and Slattery owners is far removed from the statistical concept of a "random" sample on account of the fact that they were not randomly chosen by the use of random numbers. However it is argued that the samples of dealerships, co-ops and farmers are sufficiently representative of their respective populations because:

- a) the sampling fraction of the dealers is large;
- b) the sample of co-ops is widely distributed over the area in question; and
- c) most of the sample of Slattery owners were obtained by being referred to by other Slattery owners - and not by dealers or co-ops.

It is acknowledged however that the method of obtaining the various samples could cause a degree of bias to affect the results obtained. Firstly, since the choice of the sample of co-ops was influenced by the

location of the dealership sample, the composition of the co-op sample is biased towards branches of the co-ops that operate in or near the same town as a dealer. It is likely therefore that the factors of performance under examination of that co-op branch will be influenced by the element of competition with the dealer that is bound to exist. This is likely to have the effect of reducing differences between the factors under examination. Secondly, since the search for Slattery owners was initiated by asking dealers and co-ops for a list of some of their customers, there could be an *element of bias due to the fact that the dealers or co-operatives would offer the names of customers that were:*

- a) favourably disposed towards them;
- b) within easy reach of the town; and/or
- c) in close proximity to one another.

However the degree of bias from this cause is reduced by the fact that most of the sample of Slattery owners was obtained by referral by other farmers, and not by dealers and co-ops.

#### 5.5 The Questionnaire for Owners of Slattery Combines

(See appendix for copy of actual questionnaire used. Questions 2,4,5 and 6 were asked in an endeavour to learn something about trends in the market. The information derived is not part of this report, but forms the basis of a separate report to Massey-Ferguson (S.A.) Ltd.)

Question 1. Name of farmer - this was asked for the purpose of identifying the completed questionnaire.

Question 3. Where did you buy your (last) Slattery combine? This question solicited identification of the seller whether a dealer or a co-op, for the purpose of making comparisons using the data collected.

Question 7. Please indicate method of payment used to purchase your (last) Slattery combine. This question was posed to be able to compare payment methods used by co-op and dealer customers.

Question 8(a). Who received instructions from the seller on how to operate and maintain your Slattery combine when it was delivered?

Question 8(b). Please indicate whether you think the instruction given was excellent, adequate, poor or very bad. This question was asked to determine attitudes to the adequacy of the instructions given by the seller at the time of delivery.

Question 9(a). Please indicate whether the reaping capacity of your Slattery combine exceeds, equals, or is less than the claim made by the seller at the time you bought it.

Question 9(b). Please indicate whether the reliability of your Slattery combine exceeds, equals or is less than the claim made by the seller at the time you bought it. These questions were asked to determine whether there was a measurable difference between co-ops and dealers in the degree of over-selling or under-selling of Slattery combines.

Question 10(a). Have you ever had problems with the operation of your Slattery combine in the last 3 years?

Question 10(b). When you had problems with the operation of your Slattery combine who did you call upon to rectify the problem?

Question 10(c). In the last 3 years has the seller of your Slattery combine been able to overcome all, most, only a few, or none of the problems encountered in the operation of the machine? This 3-part question was asked to determine whether there are differences in attitudes between co-op customers and dealer customers to their seller's ability to overcome operational problems.

Question 11(a). Have you ever had to buy a spare part for your Slattery combine in the last 3 years?

Question 11(b). From whom have you purchased parts for your Slattery?

Question 11(c). Please indicate the degree of availability of parts from the seller of your Slattery. This 3-part question was posed to determine differences in attitude to parts availability from the sellers of Slattery combines.

areas where there was a choice between buying from a dealer instead of from a co-op. Clues to the important elements of the buying decision could be revealed in the answers to this question.

#### 5.6 The Questionnaire for Dealers and Co-ops

The managers or sales managers from the sample of dealers and co-ops were interviewed by asking them this list of questions. Notes were made of the verbal response. The questions were mostly open-ended and were intended to initiate discussion on the topics involved. The questions are listed below, and where they are self-explanatory, no further comments are made.

Question 1. How do you attract a customer to buy a Slattery combine? This question was intended to determine the degree of aggressiveness that the respondent claimed to employ to sell this product.

Question 2(a). Do you have any salesmen in the field?  
(b). What sales staff do you have in your showroom?  
(c). Do you demonstrate on a potential customer's farm?

Question 3. Do you do any advertising or promotion of Slattery products?

Question 4(a). Do you always have a machine available on display?  
(b). Do you think that displaying the machine helps sell it?

Question 5. Have you got one now? (A check was made to see if a Slattery combine was available regardless of the reply).

Question 6. What literature and other point-of-purchase materials do you have right now to show customers?

Question 7. How do your customers pay you? What credit facilities do you offer?

Question 8. What can you offer that the dealer/co-op cannot? (This question was asked in cases where a co-op and a Massey-Ferguson dealership were in opposition in a town.)

Question 9. What is your experience with Slattery purchases with regard to the period of time required to pay for the machine? Do purchasers make full use of the credit terms offered? What proportion pay for their purchase from the proceeds of the current maize crop?

Question 10. What service facilities do you have to maintain Slattery combines?

Question 11. Do your service staff travel to the customer to attend to problems? To what extent do farmers do their own repairs of their Slatterys?

Question 12. What proportion of your service staff have received training from Slattery? (How many out of how many?)

Question 13. What is your policy with regard to Slattery spare parts?

Question 14. Do you think that your service is any better or worse than that offered by the co-operative/Massey-Ferguson dealer? (This question was asked where a co-op was in competition with a dealer in a particular town.)

Question 15. What do you think would happen to Slattery sales if Slattery products were sold only through Massey-Ferguson dealerships? (This question solicited dealer's and co-op's perceptions of the degree of loyalty that Slattery combines enjoy among their users and potential users, compared to the loyalty they have to their co-operative as suppliers of equipment for their farming operations.)

Question 16. In this area do you think there is any particular trend towards the use of tractor-drawn or self-propelled combines? (Information on this topic is of interest to Massey-Ferguson (S.A.) Ltd.)

Question 17. Do you think Slattery is gaining or losing its share of the tractor-drawn combine market in this area?

Question 18(a). What proportion of the local maize farmers still reap by hand?

(b). Why do they still do so?

(c). Do you make a point of aggressively selling to these farmers who still reap by hand?

Question 19. What sort of machine will these "hand reapers" buy when they eventually mechanise - or will they engage contract harvesters? (Of interest to Massey-Ferguson is the likely buying pattern of those farmers who are not yet mechanised in their harvesting operation.)

Question 20. Is contract harvesting used much in this area?

Question 21. In this area is there any particular need to get the harvesting done promptly?

Question 22. How saturated is the local market for combines? How do you go about selling to potential customers?

## 6. RESULTS

### 6.1 Results of Survey of Slattery Owners

#### Question 3. Source of last Slattery purchased.

<u>Dealer</u>	<u>Co-op</u>	<u>Total Respondents</u>
22	31	53

#### Question 7. Method of payment used to purchase latest Slattery combine.

	<u>Dealer customers</u>		<u>Co-op customers</u>	
	<u>Observed</u>	<u>Expected</u>	<u>Observed</u>	<u>Expected</u>
Cash and 30 day account	10	(12.87)	21	(18.13)
60 day account	1	( 0.42)	0	( 0.58)
90 day account	4	( 1.66)	0	( 2.34)
Stop order on crop proceeds, and annual instalments	2	( 2.91)	5	( 4.09)
Hire purchase and leaseback	5	( 3.32)	3	( 4.68)
No answer	0	( 0.83)	2	( 1.17)
	<u>22</u>		<u>31</u>	

#### 7. Difference between Groups

- i) Null Hypothesis  $H_0$ : There is no difference between the two groups (dealer customers and co-op customers) in the proportions that fall into the various categories by which payment was made for their Slattery combines.  $H_1$ : the two groups differ in the proportions that fall into the various categories by which payment for the Slattery combines was made.
- ii) The  $\chi^2$  test for two independent samples was chosen because the two groups (dealer customers and co-op customers) are independent and because the "scores" under study are frequencies in discrete categories. (Cash, 30 days, 60 days, etc.).

- iii) Significance level. Let  $\alpha = 0.05$ .  $N =$  number of replies to this question that were received = 51.
- iv) Decision. Since in three cells the expected frequency is less than one, the cells were re-grouped according to the table below. (According to Siegel (12) (p.110) "when  $k$  is larger than 2 (and thus  $df > 1$ ), the  $\chi^2$  test may be used if fewer than 20 per cent of the cells have an expected frequency of less than 5 and if no cell has an expected frequency of less than 1. If these requirements are not met by the data in the form in which they were originally collected, the researcher must combine adjacent categories in order to increase the expected frequencies in the various cells.")

	<u>Dealer customers</u>		<u>Co-op customers</u>	
	<u>Observed</u>	<u>Expected</u>	<u>Observed</u>	<u>Expected</u>
Cash, 30 day -, 60 day -, and 90 day accounts	15	(15.53)	21	(20.47)
Stop orders, Instalments	2	( 3.02)	3	( 3.98)
H.P. and lease back	5	( 3.45)	3	( 4.55)
	<u>22</u>		<u>27</u>	

$\chi^2$  is calculated using the formula:-

$$\chi^2 = \sum_{i=1}^r \sum_{j=1}^k \frac{(O_{ij} - E_{ij})^2}{E_{ij}}$$

Yates' correction is not necessary since there is more than one degree of freedom. The value of  $\chi^2$  for the data is 1.86. With 2 degrees of freedom the  $H_0$  thus cannot be rejected at the 0.05 level of significance.

The conclusion is that there is no significant difference between the two customer groups in the proportions that fall into the different payment categories.

2. Method of Payment

90 days and shorter	36
Longer than 90 days	15
	<u>51</u>

It is not known whether there is any information with which to compare this data in order to be able to conduct a statistical test of significance. However, since in this sample twice as many Slattery owners pay within 90 days as take longer to pay for their machines, it would indicate that the majority of Slattery owners pay within 90 days.

Question 8(a)

Person who received sellers' instructions on operation and maintenance of latest slattery

"Myself"	40
European staff	3
African staff	2
No-one (no demonstration)	3
No answer	5
	<u>53</u>

Question 8(b)

Opinion of the instruction given by the seller.

	Dealer customers		Co-op customers	
	Observed	Expected	Observed	Expected
Excellent	6	( 2.9)	0	( 1.0)
Adequate	10	(13.7)	21	(19.0)
Poor	2	( 1.7)	2	( 2.1)
Very bad	0	(0)	0	(0)
(No demonstration)	0	( 1.2)	1	( 1.0)
No answer	4	( 2.9)	1	( 4.1)
	22		24	

1. Difference between groups.

i) Null hypothesis  $H_0$ : there is no difference between the two groups in the way that they have rated the two companies they were given. i.e. the two groups differ in ratings only and that they have rated the individual company differently.

ii) Statistical Test: The  $\chi^2$  test for independence was used.

iii) Significance level:  $\alpha = 0.05$ . The number of degrees of freedom is 3.

iv) Result: Due to the expected frequencies being less than 5 in more than 10 per cent of the cells, the test was not used. Instead, an exact test was used.

$\chi^2 = 10.8$  (3 d.f.)  $p < 0.05$

Conclusion: There is a significant difference between the two groups in the way that they have rated the two companies.

Interpretation: The results show that dealer customers are more likely to rate the companies as excellent or adequate, while co-op customers are more likely to rate them as poor or very bad.

	<u>Dealer customers</u>		<u>Co-op customers</u>	
	<u>Observed</u>	<u>Expected</u>	<u>Observed</u>	<u>Expected</u>
Excellent	6	( 2.5)	0	( 3.5)
Adequate	10	(13.7)	23	(19.3)
Poor	2	( 1.7)	2	( 2.3)
Very bad	0	(0)	0	(0)
(No demonstration)	0	( 1.2)	3	( 1.8)
No answer	4	( 2.9)	3	( 4.1)
	<u>22</u>		<u>31</u>	

1. Difference between groups

- i) Null hypothesis  $H_0$ : there is no difference between the two groups in the way that they have rated the instructions they were given.  $H_1$ : the two groups differ in regard to the way that they have rated the instructions they were given.
- ii) Statistical Test: The  $\chi^2$  test for two independent samples was chosen.
- iii) Significance level: Let  $\alpha = 0.05$ .  $N$  = number of replies received to this question = 53.
- iv) Decision: Due to the expected frequencies being less than 5 in more than 20 per cent of the cells, the data has been re-grouped according to the following table:

	<u>Dealer customers</u>		<u>Co-op customers</u>	
	<u>Observed</u>	<u>Expected</u>	<u>Observed</u>	<u>Expected</u>
"Favourable" (Excellent + Adequate)	16	(15.3)	23	(23.7)
"Unfavourable" (Poor + very bad + no demonstration)	2	( 2.7)	5	( 4.3)
	<u>18</u>		<u>28</u>	

Since this is now a 2 X 2 contingency table,  $\chi^2$  is calculated using the formula:

$$\chi^2 = \frac{N \left( \left| AD - BC \right| - \frac{N}{2} \right)^2}{(A + B)(C + D)(A + C)(B + D)}$$

This formula incorporates a correction for continuity which becomes necessary since there is only one degree of freedom. The value of  $\chi^2$  for this data is 0.0405. With one degree of freedom the  $H_0$  cannot be rejected at the 0.05 level of significance.

The conclusion is that there is no significant difference between the two customer groups in the manner in which they have rated the instructions given them.

2. Difference between "favourable" and "unfavourable" ratings.

"Favourable" - excellent + adequate	39
"Unfavourable"- poor + very bad + no demonstration	7
	<hr/> 46 <hr/>

Although a statistical test of significance cannot be performed using this data, it would appear from the sample that the majority of Slattery owners rate the instructions (that they received when they purchased their machines) favourably.

Question 9(a)

Verification of sellers' claims of reaping capacity

	<u>Dealer customers</u>		<u>Co-op customers</u>	
	<u>Observed</u>	<u>Expected</u>	<u>Observed</u>	<u>Expected</u>
Exceeds	5	( 4.2)	5	( 5.8)
Equals	10	(12.5)	20	(17.5)
Is less than	3	( 2.1)	2	( 2.9)
Don't know	4	( 3.3)	4	( 4.7)
	<u>22</u>		<u>31</u>	

- i) Null hypothesis  $H_0$ : there is no difference between the two groups in the way that they have compared the reaping capacity with the sellers' claims.  $H_1$ : the two groups do differ in the way that they have compared the reaping capacity with claims made by the sellers.
- ii) Statistical test. The  $\chi^2$  test for two independent samples was chosen.
- iii) Significance level. Let  $\alpha = 0.05$ .  $N$  = number of replies to this question = 53.
- iv) Decision. Due to expected frequencies being less than 5 in more than 20 per cent of the cells the data has been grouped as follows:-

	<u>Dealer customers</u>		<u>Co-op customers</u>	
	<u>Observed</u>	<u>Expected</u>	<u>Observed</u>	<u>Expected</u>
Reaping capacity equals claims	10	(12.5)	20	(17.5)
Reaping capacity is different from the claims	8	( 6.2)	7	( 8.8)
Don't know	4	( 3.3)	4	( 4.7)
	<u>22</u>		<u>31</u>	

The value of  $\chi^2$  for this data is 2.0.

With 2 degrees of freedom the  $H_0$  cannot be rejected at the 0.05 level of significance.

The conclusion is that there is no difference between the two groups in the way that they have compared the reaping capacity of their combines with the claims made by the seller.

Question 9(b)

Verification of sellers' claims of reliability.

	<u>Dealer Customers</u>		<u>Co-op Customers</u>	
	<u>Observed</u>	<u>Expected</u>	<u>Observed</u>	<u>Expected</u>
Exceeds	1	( 0.8)	1	( 1.2)
Equals	16	(14.9)	20	(21.1)
Is less than	0	( 2.1)	5	( 2.9)
Don't know	5	( 4.2)	5	( 5.8)
	<u>22</u>		<u>31</u>	

- i) Null hypothesis  $H_0$ : There is no difference between the two groups in the way that they have compared the reliability with the sellers' claims.  $H_1$ : The two groups do differ in the way that they have compared the reliability with the claims made by the seller.
- ii) Statistical Test: The  $\chi^2$  test for two independent samples was chosen.
- iii) Significance level. Let  $\alpha = 0.05$ .  $N$  = number of replies to the question = 53.
- iv) Decision. Due to the expected frequencies being less than 5 in more than 20 per cent of the cells, the data has been grouped as follows:

	<u>Dealer customers</u>		<u>Co-op customers</u>	
	<u>Observed</u>	<u>Expected</u>	<u>Observed</u>	<u>Expected</u>
Reliability equals claims	16	(14.9)	20	(21.1)
Reliability is different from claims	1	( 2.9)	6	( 4.1)
Don't know	5	( 4.2)	5	( 5.8)
	<u>22</u>		<u>31</u>	

The value of  $\chi^2$  for this data is 2.53. With 2 degrees of freedom, the  $H_0$  cannot be rejected at the 0.05 level of significance.

The conclusion is that there is no difference between the two groups in the way that they have compared the reliability of their combines with the claims made by the seller.

Question 10(a)

Respondents who claim to have had problems in the last 3 years.

	<u>Dealer customers</u>		<u>Co-op customers</u>		<u>Total</u>
	<u>Observed</u>	<u>Expected</u>	<u>Observed</u>	<u>Expected</u>	
Yes	7	( 7.5)	11	(10.5)	18
No	15	(14.5)	20	(20.5)	35
	<u>22</u>		<u>31</u>		

- i) Null hypothesis  $H_0$ : The two groups do not differ significantly in claiming that they have had problems with their combines in the last 3 years.  $H_1$ : The groups differ.
- ii) Statistical test. The  $\chi^2$  test for two independent samples was chosen.
- iii) Significance level Let  $\alpha = 0.05$ .  $N =$  number of replies = 53.

- iv) Decision. The value of  $\chi^2$  for this data is 0.00028. With 1 degree of freedom the  $H_0$  cannot be rejected at the 0.05 level of significance.

The conclusion is that there is no significant difference between the two customer groups in the proportions in which they claim that they have had problems with their combines in the last 3 years.

Question 10(b)

Parties called upon to rectify problems

	<u>Dealer customers</u>	<u>Co-op customers</u>
Seller of the Machine	3	7
Other Slattery agent	0	0
Other garage - not a Slattery agent	0	0
Slattery technical representative	0	0
No-one	4	4
	<u>7</u>	<u>11</u>

Question 10(c)

Experience of sellers' ability to overcome problems encountered

	<u>Dealer customers</u>	<u>Co-op customers</u>
All problems	3	0
Most problems	0	5
Only a few problems	0	0
None	0	2
	<u>3</u>	<u>7</u>

- i) Null Hypothesis  $H_0$ : There is no difference between the two groups of customers in the way that they rate the sellers' ability to rectify problems when called upon to do so.
- $H_1$ : There is a difference between the two groups of customers in the way that they rate the sellers' ability to rectify problems when called upon to do so.
- ii) Statistical Test. In view of the small sample size obtained in the final section of this question, no statistical test may be used.
- iii) Conclusion. No valid conclusions can be drawn.

Question 11(a)

Number of respondents requiring to buy spare parts for their Slattery combines in the last 3 years.

Yes	50
No	3

Question 11(b)

Source of spare parts purchased

	<u>Dealer customer</u>		<u>Co-op customer</u>	
	<u>Observed</u>	<u>Expected</u>	<u>Observed</u>	<u>Expected</u>
The seller	6	(12.4)	25	(18.6)
Manufacturer	0	(0)	0	(0)
Other Slattery agent	9	( 4.4)	2	( 6.6)
Seller plus other Slattery agent	5	( 3.2)	3	( 4.8)
	<u>20</u>		<u>30</u>	

In view of the expected frequencies being less than 5 in more than 20 per cent of the cells, this data can be re-cast as follows:

	<u>Dealer customers</u>		<u>Co-op customers</u>	
	<u>Observed</u>	<u>Expected</u>	<u>Observed</u>	<u>Expected</u>
Exclusively from the seller	6	(12.4)	25	(18.4)
Not exclusively from the seller	14	( 7.6)	5	(11.4)
	<u>20</u>		<u>30</u>	

i) Null Hypothesis  $H_0$ : There is no difference between the two groups in the proportion that purchases spare parts exclusively from the seller of their combines.  $H_1$ : A greater proportion of co-op customers purchase their spare parts exclusively from the seller of their combines.

ii) Statistical Test The  $\chi^2$  test for two independent samples is used.

iii) Significance level. Let  $\alpha = 0.05$ .  $N = 50$ .

iv) Decision. The value of  $\chi^2$  for this data is 12.31. With one degree of freedom the  $H_0$  can be rejected at the 0.05 level of significance.

The conclusion is that a greater proportion of co-op customers purchased their spare parts exclusively from the seller of their combines.

Question 11(c)

The degree of availability of spare parts from the sellers of Slattery combines.

	<u>Dealer customers</u>		<u>Co-op customers</u>	
	<u>Observed</u>	<u>Expected</u>	<u>Observed</u>	<u>Expected</u>
Always available	3	( 4.25)	14	(12.75)
Sometimes available	6	( 4.75)	13	(14.25)
Seldom available	0	(0)	0	(0)
	<u>9</u>		<u>27</u>	

i) Null hypothesis  $H_0$ : There is no difference between the two groups in the relative frequencies in which respondents have categorised the degree of parts availability.  $H_1$ : A greater proportion of dealer customers experience erratic parts availability than co-op customers.

ii) Statistical Test. The  $\chi^2$  test for two independent samples is used.

iii) Significance level. Let  $\alpha$  be 0.05.  $N = 36$ .

iv) Decision. The value of  $\chi^2$  for this data is 0.334. With one degree of freedom the  $H_0$  cannot be rejected at the 0.05 level of signification.

The conclusion is that dealer customers do not rate parts availability significantly differently from co-op customers.

Question 12 (a)

Number of respondents unable to continue harvesting due to mechanical failures of their Slattery combines.

	<u>Dealer customers</u>	<u>Co-op customers</u>
Yes	5	11
No	16	19
No answer	1	1
	<u>22</u>	<u>31</u>

Question 12(b)

Whether the length of time that the Slattery combine was out of action was anything to do with the service received from the seller.

	<u>Dealer customers</u>	<u>Co-op customers</u>
Yes	1	2
No	4	9
	<u>5</u>	<u>11</u>

Question 12 (c)

Customers' rating of the service of the seller when the combine was out of action.

	<u>Dealer customers</u>	<u>Co-op customers</u>
Excellent	0	0
Good	1	1
Poor	0	1
Bad	0	0
	<u>1</u>	<u>2</u>

- i) Null hypothesis  $H_0$ : There is no difference between the two groups in the relative frequency of rating of the sellers' service.  $H_1$ : The relative frequency of ratings of the co-ops' service is different from the relative frequency of ratings of the dealers' service.
- ii) Statistical Test In view of the small sample size obtained in the final section of this question, no statistical test may be used.

Question 13 (a)

Whether or not the seller of the respondents' Slattery combine have any service staff.

	<u>Dealer customers</u>	<u>Co-op customers</u>
Yes	17	22
No	0	4
Don't know	5	5
	<u>22</u>	<u>31</u>

Question 13 (b)

Respondents' ratings on competence of sellers' staff to carry out all the necessary repairs and maintenance of the respondents' Slattery combines.

	<u>Dealer customers</u>		<u>Co-op customers</u>	
	<u>Observed</u>	<u>Expected</u>	<u>Observed</u>	<u>Expected</u>
Completely competent	6	(10.4)	19	(14.6)
Only partially competent	9	( 4.2)	1	( 5.8)
Not competent	0	( 0.8)	2	( 1.2)
Don't know	7	( 6.6)	9	( 9.4)
	<u>22</u>		<u>31</u>	

In view of the expected frequencies being less than 5 in more than 20 per cent of the cells this data was re-cast as follows:

	<u>Dealer customers</u>		<u>Co-op customers</u>	
	<u>Observed</u>	<u>Expected</u>	<u>Observed</u>	<u>Expected</u>
Completely competent	6	(10.1)	19	(14.9)
Not completely competent	9	( 4.9)	3	( 7.1)
	<u>15</u>		<u>22</u>	

i) Null hypothesis  $H_0$ : There is no difference between the two groups in the relative frequencies in which respondents rate

the competence of service staff of the sellers of their Slattery combines to carry out the necessary repairs and maintenance.  $H_1$ : The relative frequency of co-op customers who rate the sellers' service staff as "completely competent" is greater than the relative frequency of dealer customers making the same rating.

- ii) Statistical test. The  $\chi^2$  for two independent samples is used.
- iii) Significance level. Let  $\alpha$  be 0.05.  $N = 37$ .
- iv) Decision. The value of  $\chi^2$  for this data is 6.76. With one degree of freedom the  $H_0$  can be rejected at the 0.05 level of significance.

The conclusion is that the proportion of co-op customers that rate the sellers' service staff as "completely competent" is significantly greater than the proportion of dealer customers making the same rating.

#### Question 14

##### Comparison of sellers' charges for repairs and service of machinery

	<u>Dealer customers</u>	<u>Co-op customers</u>
Less than	0	1
Similar to	10	14
Greater than	0	0
Don't know	12	16
	<u>22</u>	<u>31</u>

- i) Null hypothesis  $H_0$ : There is no difference in the proportion in which the two groups rate the charges that the sellers of their combines make for repairs and service.

$H_1$ : The proportions differ.

- ii) Statistical test. In view of the small cell sizes of rating other than 'similar to', no statistical test can be used.
- iii) Conclusion. It would appear obvious that dealer customers and co-op customers rate the charges made by the sellers in equal proportions. Moreover, there seems to be no evidence to suggest that either category of seller charges at a higher or lower rate than other farm machinery suppliers.

Question 15 (a)

Willingness of sellers to send service staff to farms

	<u>Dealer customers</u>	<u>Co-op customers</u>
Yes	17	21
No	1	1
Don't know	4	9
	<u>22</u>	<u>31</u>

Question 15 (b)

Response of sellers' staff to requests to visit farms.

	<u>Dealer customers</u>		<u>Co-op customers</u>	
	<u>Observed</u>	<u>Expected</u>	<u>Observed</u>	<u>Expected</u>
Generally responds quickly	12	( 8.7)	9	(12.3)
Variable response	4	( 5.0)	8	( 7.0)
Generally responds slowly	1	( 1.2)	2	( 1.8)
Don't know	5	( 7.1)	12	( 9.9)
	<u>22</u>		<u>31</u>	

Due to expected frequencies being less than 5 in more than 20 per cent of the cells the data has been re-grouped as follows:

	<u>Dealer customers</u>		<u>Co-op customers</u>	
	<u>Observed</u>	<u>Expected</u>	<u>Observed</u>	<u>Expected</u>
Quick response	12	( 9.9)	9	(11.1)
Variable and slow response	5	( 7.1)	10	( 7.9)
	<u>17</u>		<u>19</u>	

- i) Null hypothesis  $H_0$ : There is no difference in the proportion of ratings between the two groups.  
 $H_1$ : A greater proportion of dealer customers claim that they receive quick response than do co-op customers.
- ii) Statistical test. The  $\chi^2$  two sample test is used.
- iii) Significance level. Let  $\alpha = 0.05$ .  $N = 36$ .
- iv) Decision. The value of  $\chi^2$  for this data is 1.15. With one degree of freedom the  $H_0$  cannot be rejected at the 0.05 level of significance.

The conclusion is that there is no significant difference between the two groups in the proportions of ratings of response of service staff.

Question 16.

Reasons for buying from a particular source as opposed to buying from the alternate source.

<u>Dealer customers: Reasons given:</u>	<u>Frequency</u>
I'm a Massey-Ferguson owner	3
Better service from a dealer	3
Better staff at a dealer	1
No machine available at Co-op at the time	4
Could not get suitable finance from Co-op	1
Cheaper from the dealer (old stock)	1
Co-op did not try to sell me one	1
Better terms (90 days without interest. Co-op would charge 10%)	1
Very good trade-in	5

Co-op customers: Reasons given:

Better finance facilities available	2
Co-op made the Land Bank application	1
No dealership at the time	5
Lower price (bigger discounts)	3
Better service	1
Most business done through Co-op	2

The frequencies recorded here are the number of times that the particular reasons were given. They do not relate to the number of respondents in the sample. Hence they should be taken merely as a subjective indication rather than as having any statistical significance.

Of the above remarks from both groups that were made, those relating to "lower purchase price", "bigger discounts" and "better trade-ins" form the largest group and all amount to the basic motivation of "lower purchase price".

Their frequency of mention exceeds the frequency of mention of better financial terms, better service staff, etc. This subjective observation is of interest as a possible indication of the hierarchy of buying motives. It is of interest to note that "better service" and "better terms" were mentioned by both groups.

## 6.2 Results of Survey of Dealerships and Co-ops

Since the survey of dealerships and co-ops was carried out using open-ended questions, the results are in the form of notes made during the discussions, and as such are not in a form suitable for statistical analysis. The main findings are in the form of a presentation of the main ideas emerging from the discussions held with the management of dealerships and co-ops.

Question 1: How do you attract a customer to buy a Slattery combine?

Dealers: Prospective customers are canvassed during visits made by sales staff in the course of their business in connection with tractor sales. Demonstrations are arranged for prospective customers.

Co-ops: No active canvassing is claimed by any of the co-ops. Co-ops supply what is requested by their members, and all but one claimed that they do not try to influence the buying decision. The general consensus was that Slattery combines sold themselves – farmers asked for them and all that was required in selling effort was to stock them.

Conclusion: Dealers are more aggressive in their policies regarding active selling to potential customers. Co-ops play a passive role.

Question 2(a): Do you have any salesmen in the field?

(b): What sales staff do you have in your showroom?

(c): Do you demonstrate Slattery combines on prospective customers' farms?

Dealers: Sales staff consisted of the branch manager in all cases. He handled sales in the field and in the showroom. All dealers claimed that they did demonstrate.

Co-ops: Most co-ops had one salesman besides the branch manager who handled field and showroom sales. Some co-ops claimed that they held demonstrations. Others said that demonstrations consisted of taking the prospective customer to a farm where a Slattery combine was in operation for him to see. One co-op manager said that demonstrations were superfluous since Slattery combines were so widely distributed and so well known.

Conclusion: There appears to be no real difference between dealers and co-ops in their willingness to demonstrate.

Question 3: Do you do any advertising of Slattery products?

Dealers: One dealer claimed to advertise in the local paper and at the local drive-in. The remainder did no advertising of Slattery products.

Co-ops: One co-op placed Slattery advertisements in its newsletter.

Conclusion: No difference between co-ops and dealers since no substantial amounts of advertising are undertaken.

Question 4(a): Do you always have a machine available for display?

(b): Do you think that the display of a machine helps to sell it?

Dealers: All claimed to have a machine available for display during the "selling season" for combines. None of them thought that displaying the machine had anything to do with the buying decision since Slattery combines were so well known.

Co-ops: All co-ops claimed to have Slattery combines in stock during the "selling season". Half of the management of co-ops thought that the display of Slattery helped to sell them. The idea emerged that sales could be lost to opposing makes if a Slattery was not in stock.

Conclusion: No difference between co-ops and dealers in their willingness to maintain representative stocks.

Question 5: Have you got one now?

All co-ops and dealers had at least one Slattery in stock.

Question 6: What literature and other point-of-purchase materials do you have right now to show customers?

Dealers: All claimed to have pamphlets available — but that they were seldom used because farmers knew the product so well.

Co-ops: Five out of eight co-ops claimed to have pamphlets available. All the co-ops were unanimous in saying that pamphlets were superfluous since the Slattery combine was well known.

Conclusion: Dealers appear to be more willing to stock pamphlets – but there is widespread doubt about their efficacy.

Question 7: How do your customers pay you?  
What credit facilities do you give?

Dealers: All gave a discount for cash transactions. The discount varied between 5% and 7½%. All regarded 30-day accounts as "cash". All allowed 90-day accounts. Two gave discounts on 90-day accounts. One allowed a 6-month account without interest but charged 15% interest thereafter. All but the dealer who allowed a 6-month account claimed that they referred their customers to Hire Purchase companies or the Land Bank for terms longer than 90 days. The overall impression was given that there was a great deal of leeway that could be negotiated and that each account was treated on its merits.

Co-ops: All gave discounts for cash and 30-day accounts. The discounts varied between 5% and 7½%. All allowed 90-day accounts without interest. Some gave discounts for 90-day accounts – but it was less than the cash discount. There was no consistency in the terms that were offered on accounts over 90 days. Some co-ops claimed that they did not grant credit over 90 days and that customers requiring longer than 90 days were referred to the Land Bank or to Hire Purchase companies. Two co-ops claimed to offer schemes whereby a one-third deposit was required at the time of purchase, and the remaining balance could be paid over two years at 12% interest – but that these schemes could only be offered when the Land Bank made the finance available to the co-ops.

Conclusion: There appeared to be as much variation within the samples of dealers and co-ops as there was between them in the financial facilities they could offer. The co-ops appeared to have an advantage over the dealers when it came to negotiation for finance from the Land Bank. The dealers had to make formal application on behalf of the customer for long term financing of the machine. (No deposit, 4 years to pay, 8% interest). They then had to wait for formal approval of the loan before the sale could be closed. The co-ops on the other hand apparently act as agents for the Land Bank and are in a position to approve the loan and close the sale at the same time. Apart from the length of time required to process a Land Bank loan application, the only other difference between the co-ops and the dealers was the "one third

deposit, remainder over 2 years" scheme offered by some of the co-ops.

Question 8: What is your experience with Slattery purchasers with regard to the period of time required to pay for the machine? Do purchasers make full use of credit facilities offered? What proportion pay for their machines from the proceeds of the first crop?

Dealers: The consensus of opinion was that not many customers take longer than the first season to pay for their combine. Most of the estimates of the proportion of customers that paid for their machines within the first season were around 90%. The lowest estimate was 55%. A point of interest that one dealer made was that the method of payment for a combine contrasted strongly with the method of payment for a tractor. According to this dealer 10% of his tractor customers pay cash and 90% use H.P. terms. These proportions are the reverse of the payment pattern of combine customers.

Co-ops: The estimates of the proportion of customers that paid for their combines in the first season showed far more variation than the estimates made by the dealers, in fact the estimates were evenly distributed from 5% to 90%.

Conclusion: It would appear that a larger proportion of co-op customers use the credit facilities available than do the dealer customers — but that the proportion that pays for the machine by the end of the first harvest is substantial.

Question 9: What service facilities do you have to repair and maintain Slattery combines?

Dealers: All had full workshop facilities.

Co-ops: All but one had full workshop facilities. The branch not having a workshop referred its customers to a larger branch of the same co-op nearby.

Conclusion: There are no consistent differences between co-ops and dealers in the facilities available for the repair and maintenance of Slattery combines. It would appear that no special tools or equipment are necessary for this task and the normal range of workshop equip-

ment is adequate.

Question 10 (a): Do your service staff travel to the customer to attend to problems?

(b): To what extent do farmers do their own repairs?

Dealers: All dealers claimed to send service staff to attend to requests for help. Estimates of the number of farmers that carried out their own repairs were mostly above 80%. The lowest estimate was 60%.

Co-ops: All co-ops except the one that referred its customers to the larger branch nearby claimed to send their service staff in answer to calls from farmers. Estimates of the number of farmers who do their own repair work on their Slattery combines varied between 70% and 100%.

Question 11: What proportion of your service staff have received training from Slattery?

Dealers: Three of the dealers claimed that all of their mechanics had received training from Slattery. One dealer said that 2 out of 9 of his mechanics had been trained — and these were formed into a specialist team to work on Slattery combines exclusively.

Co-ops: Five of the co-ops said that none of their staff had been trained by Slattery. One of these said that the staff received training at the co-op's own training centre. The remainder of the co-ops claimed varying proportions of Slattery-trained personnel from 2 out of 6 to 100%.

Conclusion: A greater proportion of dealers have Slattery-trained staff than do co-ops.

Question 12: What is your policy with regard to Slattery spare parts?

Dealers: The impression given by all the dealers was that they kept a smaller stock of parts than the co-ops, and that the stock was restricted to fast-moving parts.

Co-ops: Adequate stocks of fast and slow moving parts were kept and they were increased during the reaping season. Estimates of the parts inventory varied from R7000 to R50 000.

Conclusion: The co-ops keep larger stocks of spare parts than do the dealers and they are more competitive price-wise than the dealers.

Question 13: Do you think your service is any better or any worse than that offered by the dealer/co-op?

Dealers: Dealers thought they gave better service in the area of repairs and installations due to having more specialised mechanics. They conceded that the co-ops were able to offer better parts availability in view of the larger inventories that they maintained.

Co-ops: The co-ops thought they could match the dealers in most aspects – but that they were better at supplying spare parts.

Conclusion: It would appear from the claims and admissions made that co-ops have a better record for availability of parts than do the dealers. Claims and counterclaims about other aspects of service are inconclusive.

Question 14: What do you think would be the result if Slattery only sold through Massey-Ferguson dealerships?

Dealers: The dealers claimed that Slattery sales would improve due to more aggressive selling by them. They felt that the service level that they could obtain for spare parts would be much improved if they did not have to compete with co-ops who operated on smaller margins than themselves. The position at the moment was that because the co-ops under-sold them, they could not attain sufficient turnover to warrant large inventories. One dealer thought that the ease with which the co-ops could grant extended credit would cause Slattery to lose to opposition makes. Some dealers felt that since the Slattery name was so well known, potential customers would not accept "second-best" – and would buy Slattery machines wherever they were sold. A point that was raised was that Slattery machines were over-priced already, and if they had to be withdrawn from the co-ops there should be a lowering of price to ensure that they remained competitive with the L.M. machine.

Co-ops: Six of the eight co-ops thought that Slattery would lose market share if they marketed their machines through dealers exclusively. Two of these co-ops claimed that they preferred selling Slattery at present.

This preference over L.M. combines was due to the fact that they were so trouble-free, and that there were seldom any problems in having to honour guarantees. They felt that should the Slattery line be removed from them, their selling effort would be devoted to selling the L.M. combine to their members, and hence Slattery sales would suffer. All the co-ops who thought that Slattery would lose sales also thought that the loss in sales would be brought about by some financial aspect. Cheaper parts, more generous terms, bigger discounts and the bonus on volume of business transacted through the co-op were given as reasons why farmers would prefer to purchase their machinery through the co-op. It was felt that prices of parts purchased by farmers would rise if the co-op no longer competed with dealers, and the farmers would resist this by turning away from Slattery.

Two of the co-ops interviewed thought that Slattery sales would not be affected. It was pointed out that once a farmer owned a Slattery he was unlikely to change to another make when buying another machine — and most machines that were sold were repeat buys. Differences in financial terms were not thought to be a valid reason for different buying preferences since the dealers and the co-ops used the resources of the same financial institutions.

One co-op manager thought that Slattery sales would suffer if the co-ops could no longer handle Slattery products. To illustrate his point he gave his sales figures for the past three years as follows:

Table 2: Comparative Sales Figures of One Co-op

	<u>L.M.</u>	<u>Slattery</u>
1975	2	20
1976	4	18
1977	10	14

This manager preferred to sell the L.M. machine at his branch because he claimed that they were more reliable than Slattery machines, and hence a smaller parts inventory was required. His point was that if other branches of co-ops actively "pushed" L.M. combines the way he did, then Slattery would lose share in the same manner that they were losing share in his area.

Conclusion: Financial considerations, aggressiveness of selling effort

and brand loyalty would appear to be the factors central to the issue of the likely results of a channel change. To conclude what would happen to Slattery sales from the opinions of the handful of co-ops and dealers interviewed would be a meaningless exercise. However, the main factors involved in the interplay of forces that would come about as a result of the divestment of co-ops as a marketing channel appear to have been identified.

## 7 DISCUSSION OF RESULTS

### 7.1 Service Aspects

The objectives of the report mentioned previously that various aspects would be examined to determine whether co-ops and dealers gave the same levels of service. Each factor will be discussed in the light of the results obtained in the two surveys.

#### 7.1.1 Financial terms Offered to Customers

Dealers and co-ops both offer a variety of terms. Cash discounts appear to be within the same range, and payments made within 90 days are treated as "cash" by a proportion of both groups. Co-ops and dealers both claim to refer their customers to H.P. companies and to the Land Bank for terms over 90 days. Co-ops would appear to have an advantage over dealers when a purchaser applies for Land Bank finance because they act as agents for the Land Bank and can thus take firm decisions on accepting or rejecting loans. Some co-ops offer advantageous terms with a scheme whereby the purchaser pays  $12\frac{1}{2}\%$  interest on the outstanding  $\frac{2}{3}$  balance, but this scheme does not appear to be universal. Broadly speaking, the financial terms offered by co-ops and dealers would appear to be similar.

It should be pointed out that these conclusions are made taking the results of the surveys at face value. There were numerous anecdotes told by dealers of irregular-sounding trading practices performed by co-ops in the area of extended finance. However, to substantiate these allegations and to get the co-ops to acknowledge their occurrence would be a lengthy separate exercise. Moreover, to substantiate claims made by owners, dealers and co-ops about any financial matters relating to business transactions would be an impossible exercise, so it is acknowledged that some of the conclusions may sound rather naïve in view of the fact that they are made taking the results of the two surveys at face value. Where possible, an attempt has been made to double check an answer by asking the same type of question in both surveys.

#### 7.1.2 Financial terms utilized by customers

The results of the survey of Slattery owners indicate that there is no significant difference between the proportions of dealer customers and co-op customers that fall into the three broad payment categories. A

significantly large proportion of respondents claimed that they paid for their combines within 90 days. However, the answers to this question could possibly be subject to bias towards a short payment period in view of the negative status that might be attached to paying for a capital item over a lengthy period of time. The answers given by dealers to the question asking about the extent to which customers made use of credit facilities corroborates well with the responses received from the combine owners. Estimates made by co-op managers give the impression that credit facilities are used more by co-op customers than by dealer customers. Despite this apparent difference, it is of interest to note that the proportion that does in fact make use of credit is by no means overwhelming. The overall impression gained is that due to the high proportion of customers who pay within 90 days, credit terms are not a major factor influencing the buying decision. Purchase price and its determinants in the form of discounts and trade-ins offered are a greater influencing factor in the buying decision.

#### 7.1.3 Repair and Maintenance Facilities Available

Results of the co-op and dealer survey indicate no consistent difference between co-ops and dealers with regard to the facilities available for repairs and maintenance of combines. It would appear that no special tools or equipment are needed for Slattery combines and a moderately well-equipped workshop would provide an adequate repair and maintenance facility. Dealers had a higher proportion of specially trained staff.

#### 7.1.4 Repairs and Maintenance Carried Out

The manner in which question 10 was answered would indicate that very few Slattery owners call upon the seller to undertake repairs. Because of the way that the question was asked, the bulk of the respondents were "filtered out" with the result that there were insufficient respondents in the final sample to be able to draw valid conclusions about the sellers' success rate in solving operational problems. It could be argued that the word "problems" as used in the questionnaire could be subject to differing interpretation. However, it is significant to note what a small proportion of the original sample claim to have called upon the seller of the machine to sort out operational problems. This would indicate that the majority of owners do not have operational problems or that the problems are not so great

that they cannot be handled by the owners themselves. Question 12 had a similar "filtering" effect, with the result that very few respondents were left in the sample, which had to rate the sellers' service when their machines were out of action. Question 13 solicited the response of respondents to the competence of the sellers' staff to carry out repairs and maintenance. Co-op customers were more positive about their competence than were dealer customers, although neither group made significantly consistent negative ratings.

There could be an element of inconsistency in the results since in question 10, ten respondents claimed to have called upon the seller of their combines when they had operational problems. In question 12, 16 respondents claimed to have had mechanical failures in the last three years. However, in question 13, no less than 37 respondents volunteered opinions on the competency of service staff to undertake repairs and maintenance. A question that arises is, with what authority can 37 of the respondents judge the competency of the service staff if a maximum of 16 have ever had cause to call upon them to rectify problems? One answer to this might be that the service staff have been called upon to repair machinery other than Slattery combines.

The overall impression gained was that the sellers of Slattery combines carried out only a minor proportion of the repairs and maintenance that were required -- the major part was carried out by the owners themselves. (This corroborates well with the large estimates made by dealers and co-ops.) The service staff of co-ops are seen to be more competent than the staff of dealers, but there appears to be no consistent difference between the satisfaction of the two groups of customers with regard to actual repairs and maintenance carried out. There is no evidence to suggest that either co-ops or dealers charge more or less than other suppliers of farm machinery in the Western Transvaal.

#### 7.1.5 Calls to Customers to Undertake Repairs and Maintenance

The owner survey and the seller survey indicate that co-ops and dealers are equally willing to send service staff on calls and there is no significant difference in ratings of response rate between the two groups of customers.

#### 7.1.6 Installation and Instruction in the Use of New Machinery

At first glance, the ratings given the dealers are more positive than the ratings given to the co-ops by their respective customers. However,

due to the smallness of the sample, and the consequent re-grouping of categories to ensure adequate expected frequencies, the finer meaning of the ratings is lost when the groupings are made into the equivalent of "favourable" and "unfavourable" ratings. No significant difference is found between the two customer groups when the ratings are grouped in this manner.

#### 7.1.7 Availability of Spare Parts

The conclusion that a greater proportion of co-op customers than dealer customers purchased their spare part requirements solely from the seller of their equipment, ties in well with the finding that the co-ops have larger parts inventories and hence a better record of parts availability. Those dealer customers who did not purchase their spare parts exclusively from the dealer all nominated co-ops as the alternative source of supply that was used. It would appear that the dealers were not able to maintain large parts inventories because they could not achieve sufficient turnover to warrant such a comprehensive range of parts. The low turnover is apparently caused by a price differential between dealers and co-ops. It is thus shown that co-ops give better service to their customers than do dealers in the area of spare parts availability and their parts are more competitively priced. This finding is made despite there being no significant difference in ratings of parts availability between the two groups.

### 7.2 Aspects of Selling Effort

Each aspect of selling effort as mentioned in the objectives of the report will be discussed in relation to the results of the two surveys.

#### 7.2.1 Willingness to Carry Representative Stock

No differences were found between co-ops and dealers in their willingness to carry representative stocks. A proportion of both dealers and co-ops mentioned that stocks were increased for the "buying season" and were allowed to dwindle for the remainder of the year. Since the buying pattern of combines is very much a seasonal one and inventory involves the tying up of working capital, this practice cannot be faulted. Visual checks verified that all co-ops and dealers interviewed did in fact have inventory on hand.

### 7.2.2 Demonstration of Machinery

Although there appears to be some leeway in the interpretation of what constitutes a demonstration, there does not appear to be much difference between dealers and co-ops in this aspect. However, from the conversations held, it would seem that dealers are more active in this regard in that demonstrations are part of their canvassing process. Co-ops, on the other hand, appeared to play a more passive role when it came to demonstrations in that they only demonstrated when specifically asked to demonstrate.

### 7.2.3 Display of Machinery

This aspect cannot be separated from the seller's willingness to carry stock, since while this type of stock is on hand, it is simultaneously on display. Items of machinery of this size are rarely displayed on showroom floors in either co-ops or dealerships. They are normally parked in a yard along with the other stock of machinery on hand. No difference was thus found between co-ops and dealers in their willingness to display the machinery. It would appear that the display of Slattery combines is of little importance to the buying decision.

### 7.2.4 Sales Staff Activity

The dealer and co-op survey indicated that the two groups have different staffing structures necessitated by their differing modus operandi. Of more importance was the fact that there were distinct differences in the functions of the sales people from the two types of outlet. The dealership managers claimed to actively canvass Slattery combines when they came into contact with farmers. Co-op sales staff on the other hand claimed that their task was not to try to influence the buying decision of the co-op member, but merely to supply his requirements. The two questions seeking substantiation of the claims made by the sellers concerning reaping capacity and reliability of the respondents' machines, were designed to detect any consistently different pattern of over-selling or under-selling by the sales staff of the sellers. No significant difference was found. As previously mentioned, no significant difference was found between the way the two groups rated the installation and instructions given by the sales staff at time of delivery.

The two co-ops that reported greater sales of L.M. combines than Slattery combines provide an enlightening insight into the behaviour of

the market when a particular product is "pushed" — either by the representative or the co-op sales staff. It is known that Slattery has employed representatives in the field to stimulate demand in the past. It is clear that the activities of these representatives have had a hand in Slattery's sales successes. It is interesting to note the dramatic depressing effect that is made on Slattery's market share where the influence of a competitive company is greater than Slattery's.

#### 7.2.5 Advertising

Since neither co-ops nor dealers advertise with any degree of consistency, one must conclude that there is no difference between them in this regard. The feeling conveyed by dealers and co-ops was that advertising of Slattery products was of doubtful value. Word of mouth was a far stronger medium of communication for such a well-established product.

#### 7.2.6 Availability of Display Materials

Dealers appear to be more willing to have pamphlets available than co-ops, but the consensus of opinion would indicate that the availability of pamphlets is of little consequence.

8 RECOMMENDATIONS TO THE MANUFACTURER

- (a) Slattery should analyse the sales performance of each co-op branch with respect to Slattery combines, with a view to determining where Slattery is losing market share.
- (b) The Slattery franchise should be transferred from co-op branches where Slattery is losing market share in cases where a suitable Massey-Ferguson dealership is available. The removal of the franchise should take the form of a non-renewal of franchise contract when it falls due. Should this be impossible due to the risk of losing the entire co-op's account, then Slattery should detail its representatives to concentrate their efforts in those areas where Slattery is losing share, in order to counteract the influence that is causing loss of share.
- (c) Exclusive dealerships to Massey-Ferguson dealers should stipulate reduced margins and make allowance for strictly-maintained inventory levels adequate to enable specified service levels to be maintained.
- (d) Technical representatives should be used to stimulate demand and foster commitment to a Slattery combine among potential buyers in areas served by co-ops.

## 9 IMPLICATIONS OF THE FINDINGS

This report has focussed on service and selling aspects that are part of the customer - intermediary - manufacturer relationship that exists in Slattery's marketing channels in the Western Transvaal. The literature review was largely centred on the topic of such relationships and it was pointed out that reviews of the relationship should be carried out on an ongoing basis to evaluate the performance of the channels used. The criterion to be used by a manufacturer when making assessments of this nature must of necessity be whether or not its best interests are being served by a particular channel. Therefore, the findings of this report should be considered in terms of their effect on sales of Slattery combines and Slattery's share of the tractor drawn combine market. (Profitability of the channels is of no consequence to Slattery, since the intermediaries used are merchant middlemen.)

The conclusion that is reached is that in the Western Transvaal, Slattery (in return for the granting of selective or exclusive distribution rights) generally receives a satisfactory level of customer service from both types of intermediaries that it employs to distribute its maize combines. The dealers, however, are found to give an inferior level of service compared to co-ops in the aspect of spare parts availability.

Under the broad heading of selling effort, it is concluded that co-ops and dealers are adequately aggressive, with the exception of the aspect of sales staff activity. Co-op staff are found to play a passive role in selling Slattery's products due to the very nature of the 'co-ops' trading practices. Furthermore, the impartiality of the co-ops is suspect due to their vested interest in their own products.

The benefits that a manufacturer enjoys when his distribution strategy tends towards exclusive distribution are thus found to broadly correspond with the benefits that are suggested in marketing theory.

The theory states that if a channel change is contemplated, the decision to do so should be preceded by an incremental analysis of the alternatives involved. In Slattery's case, the analysis will have to take the form of a review of the sales of each co-op branch, to determine if the local dealer could not perform the selling task in that area in a more aggressive manner and achieve higher sales volumes

without compromising customer service. However, since this report has drawn attention to the fact that price is a dominating determinant of purchasing behaviour with this product, the decision to give the Slattery agency to a dealer after taking it away from a co-op, must be accompanied by some sort of control over the dealers' pricing practices, to ensure that the product will remain competitively priced. Dealers may well be grateful to accept the trade-off of lower margins in exchange for exclusive dealing rights.

A further implication of the findings affects Slattery's future use of representatives. In view of the passive nature of the co-ops in influencing buyers' preferences, the Slattery representative's task in the future must continue to be to seek out and influence potential buyers. In other words, the buyer should be "sold" on a Slattery combine by the time he approaches the co-op. In view of the more aggressive stance taken by dealers with regard to selling effort, the representatives' territories should be confined to areas served by the co-ops that continue to handle Slattery combines.

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Appendix A: English Questionnaire  
QUESTIONNAIRE FOR OWNERS OF SLATTERY COMBINES

1. Name of Farmer:

2. Please list number and make(s) of combines owned:

3. Where did you buy your (last) Slattery?

4. How long have you owned your Slattery combine/s?  
 (Tick more than one box if more than one combine owned.)

Less than 3 years.	<input type="checkbox"/>
3 - 10 years.	<input type="checkbox"/>
11 years and over.	<input type="checkbox"/>

5. What make was your most recent maize combine purchase?

6. With reference to your most recently purchased maize combine, please indicate by ticking one box which best describes it:

a. This combine replaces a self propelled combine.	<input type="checkbox"/>
b. This combine replaces a P.T.O. combine.	<input type="checkbox"/>
c. This combine is an addition to other self propelled combines.	<input type="checkbox"/>
d. This combine is an addition to other P.T.O. combines.	<input type="checkbox"/>
e. This combine is an addition to other P.T.O. and S.P. combines.	<input type="checkbox"/>
f. This combine is my first.	<input type="checkbox"/>
g. Other - please specify.	<input type="checkbox"/>

7. Please indicate the method of payment used to purchase your (last) Slattery combine.

Cash.	<input type="checkbox"/>
30-day account.	<input type="checkbox"/>
60-day account.	<input type="checkbox"/>
90-day account.	<input type="checkbox"/>
Stop order on crop proceeds.	<input type="checkbox"/>
Other (specify).	<input type="checkbox"/>

8(a) Who received instructions from the seller on how to operate and maintain your Slattery when it was delivered?

Myself.	
My European staff.	
My African staff.	
No-one.	

(b) Please indicate whether you think that the instruction given was -

Excellent.	
Adequate.	
Poor.	
Very bad.	

9(a) Please indicate whether the reaping capacity of your Slattery combine -

a.	exceeds		
b.	equals		
or c.	is less than		
			the claim made by the seller
			at the time you bought it;
or d.	don't know.		

(Please tick a, b, c or d.)

(b) Please indicate whether the reliability of your (latest) Slattery combine -

a.	exceeds		
b.	equals		
or c.	is less than		
			the claim made by the seller
			at the time you bought it;
or d.	don't know.		

(Please tick a, b, c or d.)

10(a) Have you ever had problems in the operation of your Slattery combine in the last 3 years?

Yes.		→	- Please answer part (b) below.
No.		→	- Please answer question II.

(b) When you had problems with the operation of your Slattery combine, who did you call upon to rectify the problem?

The seller of the machine.	<input type="checkbox"/>	→ Please answer part C.
Other Slattery agent.	<input type="checkbox"/>	→ Please specify:
Other garage - not a Slattery agent.	<input type="checkbox"/>	→ <div style="border: 1px solid black; width: 100px; height: 80px;"></div>
Slattery technical representative.	<input type="checkbox"/>	
No-one - have been able to sort out all problems on my own.	<input type="checkbox"/>	
Other - please specify.	<input type="checkbox"/>	

(c) In the last 3 years has the seller of your Slattery combine been able to overcome -

(a)	All	<input type="checkbox"/>
(b)	Most	<input type="checkbox"/>
(c)	Only a few	<input type="checkbox"/>
or (d)	None	<input type="checkbox"/>

of the problems encountered in the operation of the machine?

(Please tick a, b, c or d.)

11a. Have you needed to buy spare parts for your Slattery combine in the last 3 years?

Yes	<input type="checkbox"/>	→ Please answer part (b) below.
No	<input type="checkbox"/>	→ Please answer question 12.

(b) From whom have you purchased parts for your Slattery?

The seller	<input type="checkbox"/>	→ Please answer part (c) below
Manufacturer	<input type="checkbox"/>	
Other Slattery agent	<input type="checkbox"/>	→ Please specify:
Other	<input type="checkbox"/>	→ <div style="border: 1px solid black; width: 150px; height: 30px;"></div>

(c) Please indicate the degree of availability of parts from the seller of your Slattery.

Always available.	<input type="checkbox"/>
Sometimes available.	<input type="checkbox"/>
Seldom available.	<input type="checkbox"/>

12 (a) In the past three reaping seasons have you ever been unable to continue harvesting due to mechanical failures of your Slattery combine?

Yes		→ Please answer part (b) below.
No		→ Please answer question 13.

(b) Has the length of time that your Slattery was out of action anything to do with the service that you received from the seller?

Yes		→ Please answer part (c) below.
No		→ Please answer question 13.

(c) How was the service from the seller?

Excellent	
Good	
Poor	
Bad	

13(a) Does the seller of your Slattery combine have any service staff?

Yes		} — Please answer question 14.
No		
Don't know		

— Please answer part (b)

(b) Are the service staff of the seller of your Slattery -

(a)	completely competent.	
(b)	only partially competent	
or (c)	not competent	

to carry out all necessary repairs and maintenance of your machine?

14. Are the seller's charges for repairs and service

(a)	Less than	<input type="checkbox"/>
(b)	Similar to	<input type="checkbox"/>
(c)	Greater than	<input type="checkbox"/>

the repair and service charges of other farm machinery suppliers in this area?

(d)	Don't know.	<input type="checkbox"/>
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(Please tick a, b, c or d.)

15(a) Is the seller of your Slattery willing to send service staff to your farm to attend to your machine?

Yes	<input type="checkbox"/>
No	<input type="checkbox"/>
Don't know.	<input type="checkbox"/>

→ Please answer part (b) below.

→ Please answer question 16.

(b) How quickly do the seller's service staff respond to a request to visit your farm to attend to your machine?

(a)	Generally responds quickly	<input type="checkbox"/>
(b)	Variable response	<input type="checkbox"/>
(c)	Generally responds slowly.	<input type="checkbox"/>

16. Why did you buy from the Co-op/Dealer rather than from the Dealer/Co-op.

Appendix B: Afrikaans Questionnaire  
VRAGENLIJST AAN EIENAARS VAN SLATTERY-STROPER

1. Naam van Boer.

2. Maak 'n lys van die aantal en fabrikate van stropers in u besit:


3. Waar het u, u (laaste) Slattery Gekoop?

4. Hoe lank besit u, u Slattery al?

(Merk meer as een blok  
as u meer as een stroper.)

Minder as 3 jaar	<input type="checkbox"/>
3 tot 10 jaar	<input type="checkbox"/>
11 jaar en meer	<input type="checkbox"/>

5. Wat is die fabrikant van die mieliestroper wat u laaste gekoop het?

6. Met verwysing na u mees onlangse aankoop van mieliestroper, dui asseblief aan deur 'n merkie te maak in die mees gepaste blokkie.

a.	Hierdie stroper vervang 'n selfaangedrewe stroper.	<input type="checkbox"/>
b.	Hierdie stroper vervang 'n trekker-getrekte stroper . . .	<input type="checkbox"/>
c.	Heirdie stroper is 'n byvoeging tot my ander self-aangedrewe stroper.	<input type="checkbox"/>
d.	Hierdie stroper is 'n byvoeging tot my trekker-getrekte stroper.	<input type="checkbox"/>
e.	Hierdie stroper is 'n byvoeging tot my ander trekker-getrekte stroper en selfaangedrewe-stroper.	<input type="checkbox"/>
f.	Hierdie stroper is my eerste.	<input type="checkbox"/>
g.	Ander - spesifiseer asseblief.	<input type="checkbox"/>

7. Dui asseblief die wyse van afbetaling op u mees onlangse Slattery, aan.

Kontant		90 dae	
30 dae		Aftrekorder op oesopbrengste	
60 dae		Ander - spesifiseer	

8(a) Aan wie is instruksies gegee oor die werking en instandhouding van u Slattery, toe dit af gelewer is?

Usself	
U blanke personeel	
U nie-blanke personeel	
Geeneen	

(b) Dui asseblief aan of u dink dat die instruksies wat gegee is:

Uitstekend		was.
Voldoende		
Swak		
Eaie sleg		

9(a) Hoe vergelyk die oesvermoë van u Slattery-stroper met die die oesvermoë soos voorgehou deur die verkoper ten tyde van die aankoop.

Oesvermoë is (a)	Groter		as deur hom voorgehou
(b)	Net so groot		
(c)	Kleiner		
of (d)	Weet nie		

(Merk ass. a, b, c of d.)

(b) Hoe vergelyk die betroubaarheid van u nuutste stroper met die betroubaarheid soos voorgehou deur die verkoper ten tyde van die aankoop.

Dit (a)	Is meer betroubaar		as deur hom voorgehou.
(b)	Net so betroubaar		
(c)	Minder betroubaar		
of (d)	Weet nie		

(Merk ass. a, b, c of d.)

- 10(a) Het u al ooit probleme ondervind met die hantering en werking van u Slattery-stroper, die afgelope 3 jaar?

Ja	<input type="checkbox"/>	→ Antwoord asseblief deel (b) heur onder
Nee	<input type="checkbox"/>	→ Antwoord assb. vraag 11.

- (b) Toe u probleme ondervind het met die werking van u Slattery-stroper, by wie het u om hulp aangeklop om die probleme reg te stel?

Die verkoper van die masjien	<input type="checkbox"/>	→ Antw. deel (c)
Ander Slattery-agente	<input type="checkbox"/>	→ Spesifiseer assb.
Ander garage - nie 'n Slattery-agent nie	<input type="checkbox"/>	<input type="text"/>
Slattery tegniese verteenwoordiger	<input type="checkbox"/>	
Geeneen - Iekwaam genoeg om dit self reg te maak	<input type="checkbox"/>	
Ander - spesifiseer	<input type="checkbox"/>	
	<input type="checkbox"/>	

- (c) Dui aan tot watter mate die probleme met die werking van u Slattery-stroper gedurende die afgelope drie jaar deur die verkoper daarvan uitgestryk is.

(a)	<input type="checkbox"/>	Almal
(b)	<input type="checkbox"/>	Meeste
(c)	<input type="checkbox"/>	Net 'n paar
(d)	<input type="checkbox"/>	Geen

(Merk a, b, c. of d.)

- 11(a) Was dit al nodig vir u om die afgelope 3 jaar onderdele vir u Slattery-stroper ann te koop.

Ja	<input type="checkbox"/>	Antwoord assb. deel (b) hier onder
Nee	<input type="checkbox"/>	Antwoord assb. vraag 12.

- (b) Van wie het u onderdele vir u Slattery-stroper gekoop?

Die verkoper	<input type="checkbox"/>	→ Antwoord assb. deel (c)
Vervaardiger	<input type="checkbox"/>	
Ander Slattery-agente	<input type="checkbox"/>	→ Spesifiseer assb.
Ander	<input type="checkbox"/>	<input type="text"/>
	<input type="checkbox"/>	

- (c) Dui asseblief aan hoe verkrygbaar die anderdele van u Slattery-stroper vanaf die verkoper is

Altyd verkrygbaar	
Soms verkrygbaar	
Selde verkrygbaar	

- 12(a) Was u gedurende die afgelope drie oesseisoene ooit genoodsaak om stropery tydelik te stak vanweë megamese probleme aan u Slattery-stroper?

Ja		→ Antwoord assb. deel (b) onder
Nee		→ Antwoord assb. vraag 13

- (b) Het die tydsduur wat u Slattery-stroper buite werking was, enigsins iets te doen gehad met die diens wat u van die verkoper ontvang het:

Ja		→ Antwoord assb. deel (c)
Nee		→ Antwoord vraag 13

- (c) Hoe goed was die diens wat deur die verkoper gelewer is?

Uitstekend	
Goed	
Swak	
Bais sleg	

- 13(a) Het die verkoper van u Slattery-stroper enige diens personeel wat hom help?

Ja		} Antwoord assb. deel (b) onder
Nee		
Weet nie		

- (b) Is die diens-personeel van die verkoper van u Slattery-stroper:

(a)	Volkome bevoeg	
(b)	Gedeeltelik bevoeg	
of (c)	Geensins bevoeg	

om die reperasies en instandhouding van u masjien uit te voer

14. Is die verkoper se koste vir reperasies en diens:

(a)	Minder as	
(b)	Gelyk aan	
(c)	Meer as	

die regmaak en dienskoste van ander plaasmasjinerie-voorsieners in die area?

(d)	Weet nie	
-----	----------	--

(Merk assb. a, b, c of d.)

15(a) Is die verkoper van u Slattery-stroper bereid om dienspersoneel na u plaas te stuur vir herstelwerk aan u masjien.

Ja	
Nee	
Weet nie	

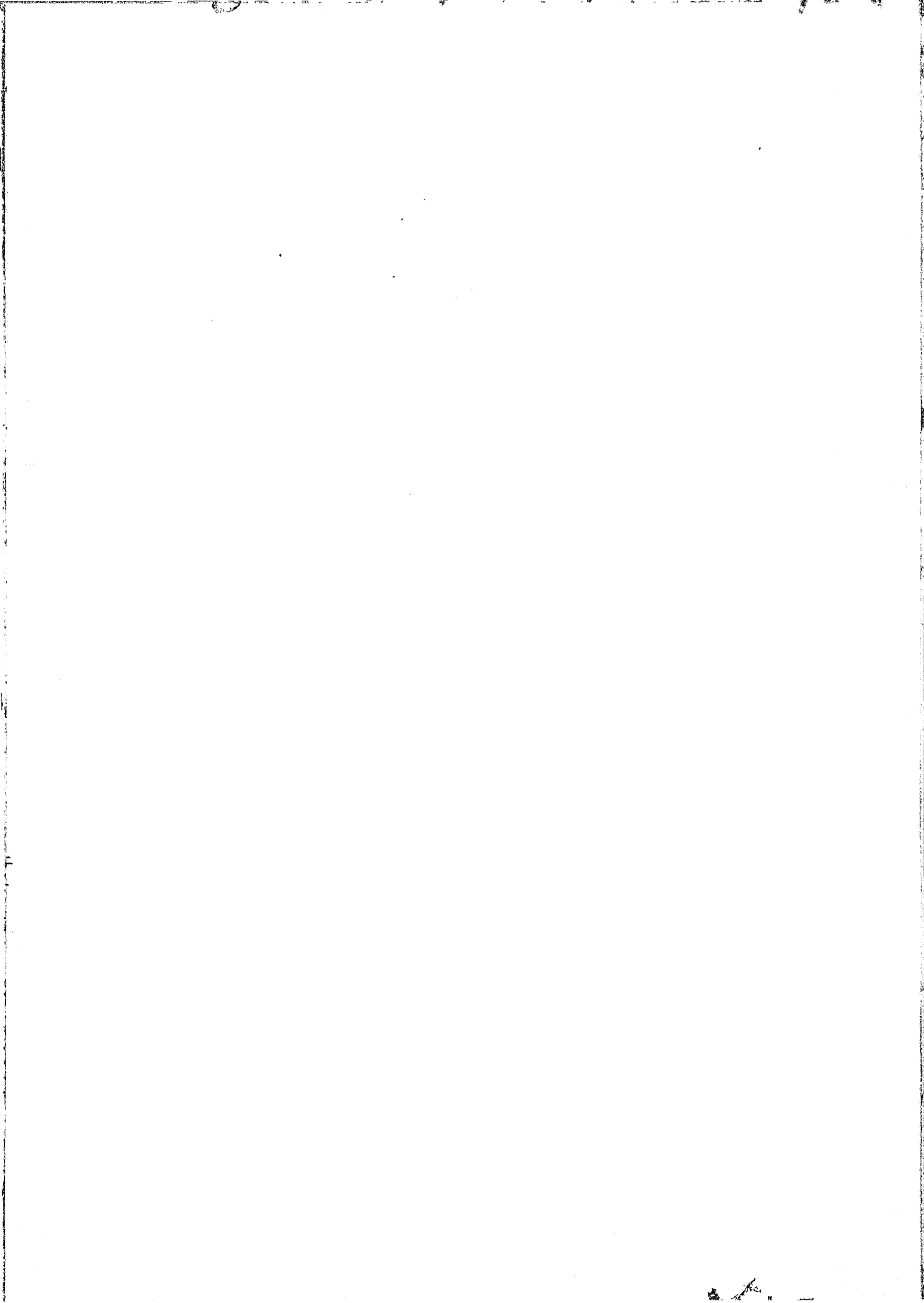
Antwoord deel (b) onderaan

Antwoord vraag 16

(b) Hoe vinnig reageer die verkoper se dienspersoneel op 'n versoek om u plaas te besoek en na u masjien om te sien.

(a)	In die algemeen vinnig	
(b)	Reaksies varieer	
(c)	In die algemeen stadig	

16. Waarom het u van die Koöp/Handelaar gekoop eerder as van die Handelaar/Koöp?



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