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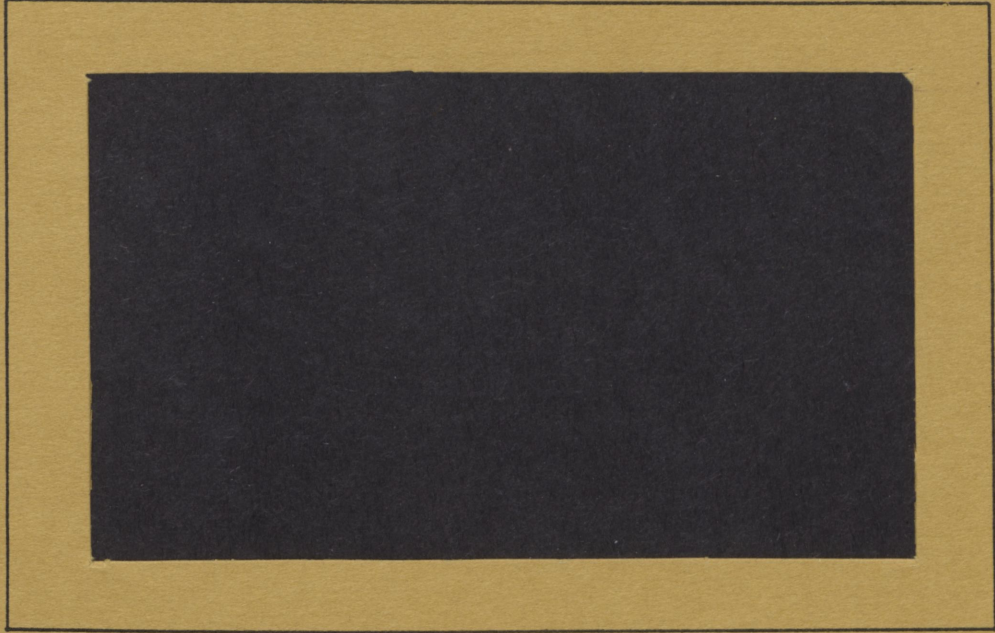
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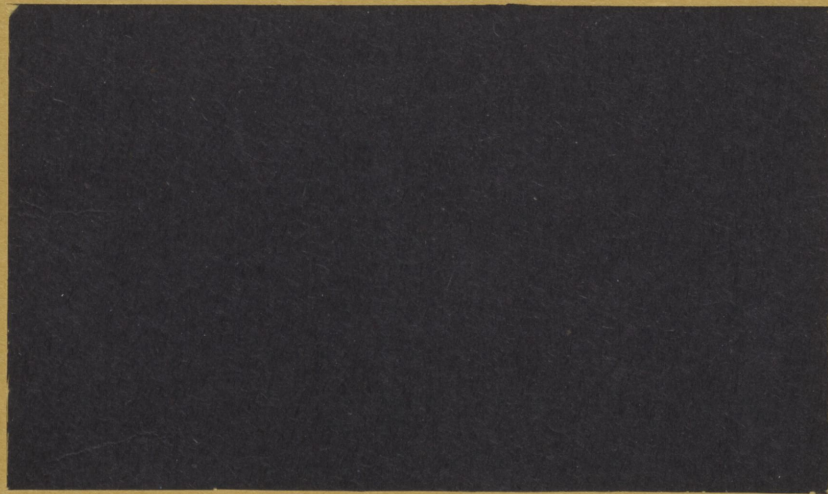
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Guelph, Ontario, Canada



A DESCRIPTION OF SEED CORN  
BUYING BEHAVIOR

Thomas F. Funk

Working Paper AE/73/13

August, 1973

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## INTRODUCTION

Knowledge of the buying behavior of farmers is important to both buyers and sellers in the market for farm supplies. Canadian farmers currently spend over \$3.5 billion each year on production inputs. Yet for the most part they are unsophisticated buyers. In many cases, even small improvements in their buying abilities could be translated into sizeable income gains. Therefore, information on how farmers behave and make decisions in purchasing can be a useful aid to stimulate improvements in their buying activity.

Firms selling inputs to farmers also have an interest in the buying behavior of farmers. These firms are constantly faced with the problem of designing marketing programs which will allow them to serve the farm market efficiently and effectively. Since knowledge about the consumer provides the only sound basis for making marketing decisions, the importance of an understanding of this area for farm supply firms is clear.

The purpose of this paper is to present the preliminary, descriptive results of a study in the area of farmer buying behavior. This paper is intended to be the first in a series dealing with this general topic. While the present paper stresses the descriptive characteristics of farmer buying, the subsequent papers will deal more with the analysis of this data, particularly with regard to market segmentation and the development and testing of a model of farmer buying behavior.

The input chosen for analysis in this research is hybrid seed corn. This product was chosen for two reasons. First, it is a branded, highly differentiated product. Second, it is one of the few major production inputs purchased by farmers which has not been the subject of such an investigation.

This paper is divided into several major sections. First, the methodology used in the data collection phase of the project is discussed. Following this, several areas of buying behavior are systematically explored. These areas are: brand selection; brand loyalty; shopping behavior; awareness; sources of information; product; dealer, and company characteristics; and attitudes. The paper concludes with a summary and conclusions section followed by a brief discussion of the implications of these findings for farm supply firms and for farmers. A copy of the questionnaire used in the survey is included in the Appendix for the interested reader.

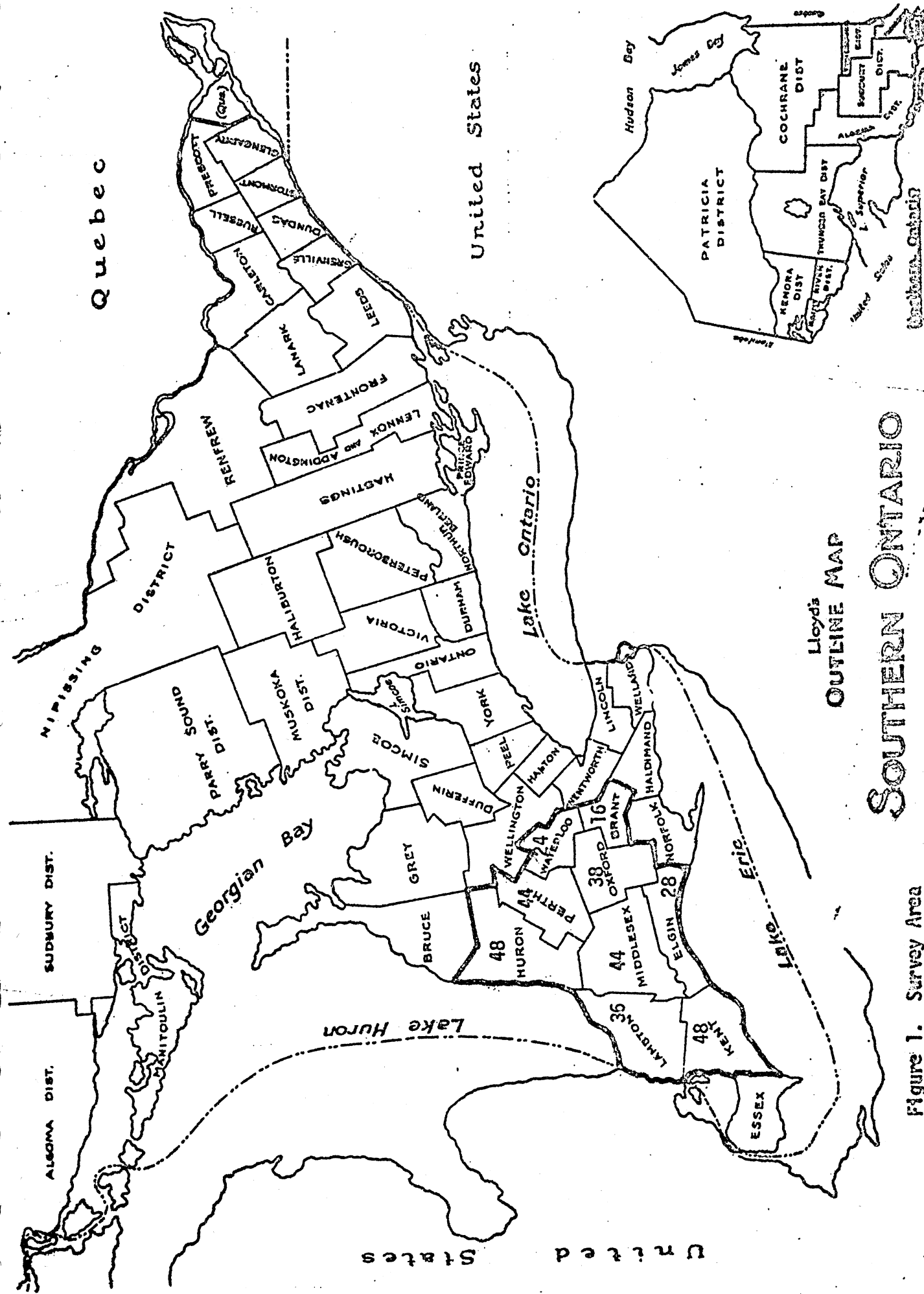
#### DATA SOURCE

Data for this study was obtained by personal interviews with a sample of Southwestern Ontario farmers. These interviews were administered by undergraduate agricultural students from the University of Guelph in late July and early August of 1972.

#### Sample

A stratified, random sample of 326 Ontario farmers was provided by the Agricultural Division of Statistics Canada for use in this research. Stratification, in this case, was on the basis of county of residence to insure proportional geographic representation. In total, nine counties were included in the sample. The survey area, together with the number of farmers from each county, is shown in Figure 1.

From the sample of 326 names provided by Statistics Canada, only 153 useable questionnaires were obtained. Sixty-eight farmers were eliminated because they did not meet the requirement of purchasing some seed corn in 1972; fifty-nine farmers would not cooperate with the enumerators; and in



Lloyd's  
OUTLINE MAP  
SOUTHERN ONTARIO

Figure 1. Survey Area



forty-six cases, the farmers on the list were no longer farming for one reason or another.

The socio-economic characteristics of the sample farmers are shown in Table 1. Since the latest available census data is for 1966, and since the survey was conducted in 1972, it would not be meaningful to compare the two to determine the representativeness of the sample. However, for a few selected socio-economic variables such a comparison was made just to see if the difference was in the expected direction. For gross income and number of tillable acres, the results of this comparison showed that the percentage of farmers in the higher categories was substantially greater in the sample than in the 1966 Census of Agriculture. Since it is anticipated that such a change occurred in the structure of Ontario agriculture over the period 1966 to 1972, this result provides some support for the representativeness of the sample. Further evidence was obtained when the age distribution of the sample was compared to that of the census. In this case the two distributions were virtually identical.

#### Survey

The farmer survey was conducted in late July and early August by undergraduate agricultural students from the University of Guelph. Each student was given a list of farmers and instructed to call each farmer to arrange an appointment for a personal interview. Prior to receiving this call, all of the farmers received a personal letter from the University explaining the nature of the project and encouraging their cooperation. In addition, all of the agricultural representatives in the survey area were informed about the project and agreed to lend their support where possible.

Table 1. Characteristics of the Sample

Characteristic	Number	Percentage
<b>Gross Income</b>		
over \$50,000	25	16.4
\$35,000 to \$49,999	23	15.0
\$25,000 to \$34,999	27	17.6
\$15,000 to \$24,999	30	19.6
\$10,000 to \$14,999	26	17.0
Under \$10,000	22	14.4
	<u>153</u>	<u>100.0</u>
<b>Tenure</b>		
Owner	92	60.1
Renter	3	2.0
Own some, rent some	58	37.9
	<u>153</u>	<u>100.0</u>
<b>Age</b>		
Under 25	4	2.6
25 to 34	23	15.0
35 to 44	42	27.5
45 to 54	35	22.9
55 to 64	34	22.2
65 and over	15	9.8
	<u>153</u>	<u>100.0</u>
<b>Cooperative membership</b>		
Member	76	49.7
Non-member	77	50.3
	<u>153</u>	<u>100.0</u>
<b>Non-farm work</b>		
None	109	71.2
Less than 100 days	22	13.8
More than 100 days	22	13.8
	<u>153</u>	<u>100.0</u>
<b>Education</b>		
1-8 years	84	54.9
9-13 years	57	37.3
Over 13 years	12	7.8
	<u>153</u>	<u>100.0</u>
<b>Seed Corn Dealer</b>		
Dealer	5	3.3
Non-dealer	148	96.7
	<u>153</u>	<u>100.0</u>
<b>Type of Farm</b>		
Dairy	43	28.1
Livestock	62	40.5
Grain	36	23.5
Other	12	7.8
	<u>153</u>	<u>100.0</u>
<b>Tillable acres</b>		
0 to 99	35	22.9
100 to 199	62	40.5
200 to 399	39	25.5
400 and over	17	11.1
	<u>153</u>	<u>100.0</u>

The questionnaire itself was developed over a period of time. An initial version of this instrument was developed and thoroughly pretested on a sample of 15 farmers from the Guelph area. The pretest uncovered several weaknesses in the design of the original questionnaire which were changed in the final version. The questionnaire required a minimum of one hour per farmer to administer. In several instances over two hours were required to complete all of the questions. A copy of the final questionnaire is included in the Appendix.

The students involved in the survey were not trained interviewers, but because of their agricultural orientation they were able to converse easily with the farmers. Prior to their farmer contacts they each received a one-half day training session in which they were thoroughly briefed on general interviewing techniques, and in particular on the questionnaire used in this project. During the course of the survey they maintained frequent telephone contact with the University.

#### BRAND SELECTION

In order to gain an initial understanding of the brand selection decision of farmers, two open-ended questions were asked at the beginning of each interview. The purpose of these questions was to probe the brand selection decision by letting the farmer respond freely to a short series of unstructured questions.

The first of the unstructured questions asked was:

I notice that last year most of the seed you purchased was .....! What were your reasons for choosing this brand?

The responses to this question are shown in the first column of Table 2. Most of the free answers volunteered by the farmers related to performance

Table 2. Reasons Given for Brand Selections

Reasons for Brand Selection	Number of Farmers Giving reason for Primary Brand <sup>1</sup>	Number of Farmers Giving reason for Secondary Brand <sup>2</sup>
<b>Corn Performance</b>		
General Performance	48	8
Growth Characteristics	28	7
Harvesting Characteristics	15	-
Standing Ability	19	-
Yield Potential	40	11
Maturity	--	9
<b>Dealer</b>		
Personality	8	-
Nearby	32	-
Service	6	5
Favor to dealer	--	5
Dealer relationship	--	15
<b>Brand Reference</b>		
Own observation	6	4
Recommended	9	2
OHCPT <sup>3</sup>	5	3
Past trials	2	-
Past experience	15	4
<b>Other</b>		
Always used it	12	4
For experimentation	--	22
Price	--	3

<sup>1</sup>The total of this column is greater than 153 since some farmers cited more than one reason.

<sup>2</sup>The total of this column is less than 153 since some farmers only purchased one brand.

<sup>3</sup>Ontario Hybrid Corn Performance Trials Report

characteristics of the brand. Of particular importance were general performance characteristics and yield potential. In addition, more specific performance characteristics such as growth, harvesting, and standing ability were frequently mentioned. Several farmers reported dealer characteristics as being important in the brand selection decision. In this regard, the nearness of the dealer was the most frequently mentioned reason. Also mentioned were the dealer's personality and service. For many farmers the reasons for choosing a particular brand were related to references. These references were either internal--own observation, past trials, or past experience--or external--recommended by friends and the OHCPTR (Ontario Hybrid Corn Performance Trials Report). Finally, a few farmers mentioned that they simply always used this brand.

The second open-ended question was a follow-up to the first.

The second question read:

I also notice that you bought some.....  
What were your reasons for choosing this brand?

The responses to this question are shown in the second column of Table 2. Unlike the reasons given for the primary brand purchased, in the case of the secondary brand, the performance characteristics of the varieties were not mentioned with the same frequency. In the case of dealer related reasons, two altogether different reasons emerged. These reasons--favor to dealer and dealer relationship--indicate that in many instances the secondary brand is purchased for personal reasons as opposed to objective, performance-oriented reasons. The reasons categorized under other show that a sizeable number of farmers purchase a primary brand for large-scale use and then one or more secondary brands for experimentation purposes.

## BRAND LOYALTY

An issue that is of considerable importance to farm supply firms is that of brand loyalty. Although there are no precise definitions of brand loyalty available, in general it can be said that this concept represents some desire on the part of purchasers to continue to purchase the same brand on a number of consecutive occasions. Thus, in the extreme case, a farmer who is completely brand loyal would purchase the same brand on every purchasing occasion. At the other extreme, a farmer who is completely non-loyal would purchase a different brand each time. In between these two extremes can be found a continuum of degrees of loyalty to brands.

The issue of loyalty to seed corn brands was investigated in this research. The first step in this process involved determining, over a period of five years, the number of different brands of seed corn used by each farmer and comparing this with the number of brands of other common production inputs the farmer used. The responses to these questions are shown in Table 3.

In terms of the average number of brands used by farmers over the five year period, Table 3 shows that farmers used more different brands of seed corn than any of the other common production inputs. The average farmer in the sample used 3.23 brands of seed corn during this period compared with 2.099 brands of tractors, the next highest input in terms of brands used. The other inputs, in decreasing order of brands used are: herbicides, 2.089 brands; feed, 1.653 brands; fertilizer, 1.605 brands; and petroleum, 1.132 brands. The percentage of farmers purchasing various numbers of brands of seed corn over the five years is shown in Figure 2.

Table 3. Comparison of Number of Different Brands Purchased in Most Recent Five Years for Six Common Production Inputs.

	Tractors	Feed	Herbicide	Fertilizer	Petroleum	Seed
Mean Number of Brands <sup>1/</sup>	2.099	1.653	2.089	1.605	1.132	3.230
Standard Deviation	0.961	0.856	1.168	0.782	0.359	2.092
Percentage of Farmers Purchasing (Number of Brands)						
0	0.7	19.0	4.6	0.7	1.3	0.0
1	27.5	44.4	35.9	54.9	86.3	20.9
2	44.4	23.5	29.4	31.4	11.8	24.8
3	20.9	10.5	20.9	10.5	0.7	18.3
4	3.9	2.0	7.2	2.6	0.0	14.4
5	2.0	0.7	0.0	0.0	0.0	5.9
More than 5	0.7	0.0	2.0	0.0	0.0	15.7

<sup>1/</sup>Includes only those purchasing the particular input

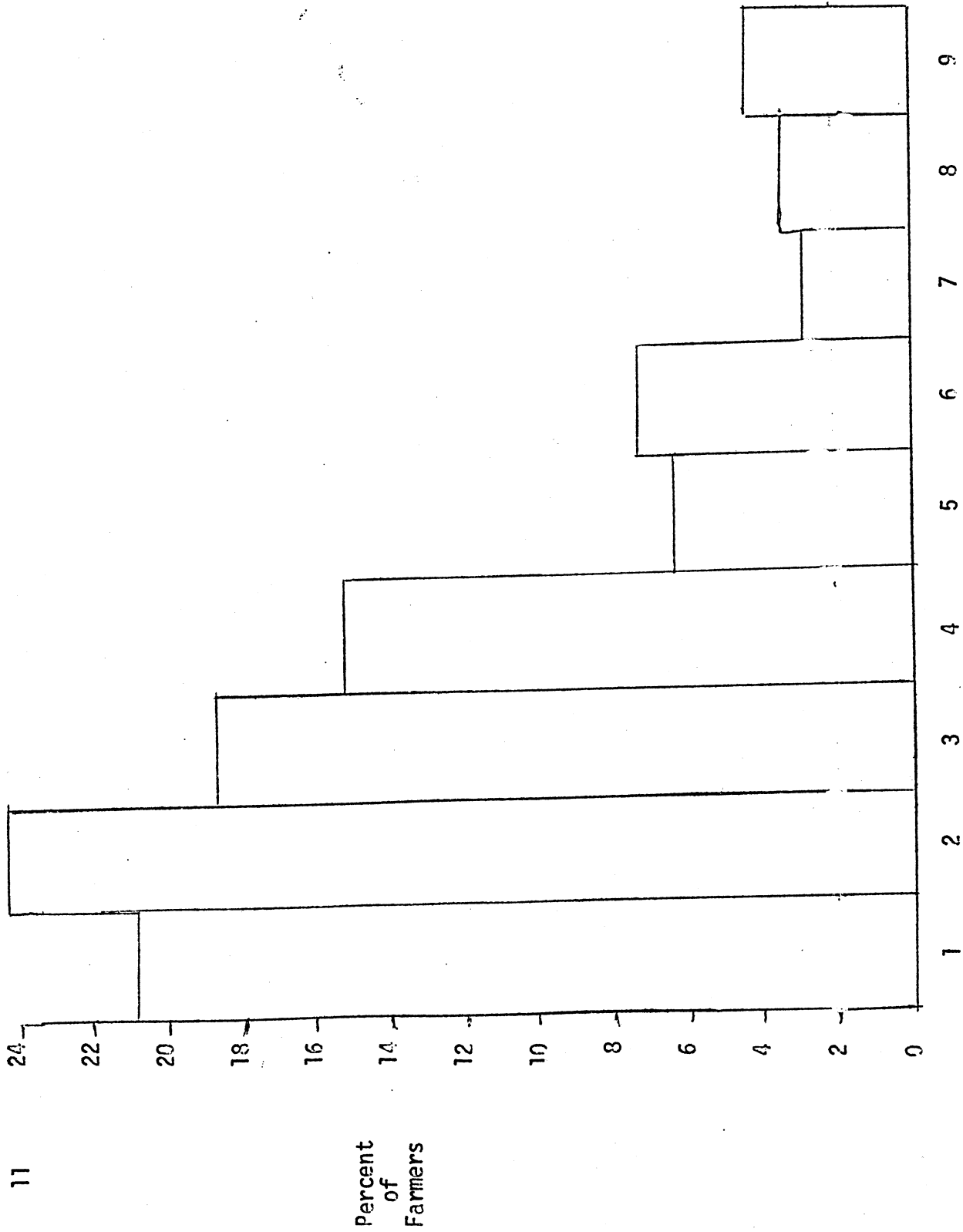


Figure 2. Percent of Farmers Purchasing Various Number of Brands of Seed Corn Over a Five Year Period



Simply looking at number of brands purchased is not a completely satisfactory way of viewing brand loyalty. This is because of the possibility of farmers using more than one brand at any time. For instance, in the case of seed corn, it is possible, and indeed likely, that a farmer will use two or more brands at the same time. If this farmer consistently uses these same two brands he is just as loyal as the farmer who only purchases one brand. The difference is that one farmer is loyal to two brands whereas the other is loyal to only one. Thus the relevant issue is not simply number of brands used, but rather the number of brand switches.

In this research, a brand switch is defined as the addition of a new brand on the deletion of an old brand from the total number purchased. This perhaps is best explained by an example. Assume that a farmer has the following purchasing pattern.

1972	A B
1971	A C
1970	A B

In 1970 this farmer purchased brands A and B. In 1971 he dropped brand B and added brand C. Since a switch is defined as either dropping an existing brand or adding a new brand, this farmer would have made two switches in 1971. The same would be true in 1972 where this farmer dropped brand C and added brand B again. Thus the total number of switches for this farmer over the three years would be four.

In order to get some idea of the number of brand switches occurring, each farmer in the sample was asked to give a complete description of his seed corn purchases for the years 1970, 1971 and 1972. While a greater

number of years would have been preferable, it was felt that purchasing data beyond 1970 would be distorted due to the farmer not remembering exactly what had been purchased. Using these purchasing records, the number of switches for each farmer was computed. The results of this analysis are shown in Figure 3.

The results in Figure 3 show that slightly over one-third of the farmers reported no switches over the three year period. That is, one-third of the farmers used the same brand or brands consistently for three consecutive years. An additional one-third of the sample made either one or two switches, and the final third made three or more switches. The greatest number of switches was nine reported by one farmer

In order to better understand what causes farmers to switch brands, those farmers who changed brands between 1971 and 1972 were asked the following unstructured question:

I notice that in 1971 the major brand you purchased was....  
While in 1972 it was....Why did you decide to purchase  
more of ....in 1972?

The responses to this question are shown in Table 4. Since only a relatively small percentage of farmers changed major brands between these years, there is a correspondingly small number of replies. The most frequent response pertained to observing a better brand, presumably in a neighbor's field on a demonstration plot. Other frequently mentioned reasons were: dissatisfied with old brand, couldn't obtain old brand, or just wanted to try something new.

To further explore this question three situation-action type questions dealing with price changes, dealership changes, and location changes were

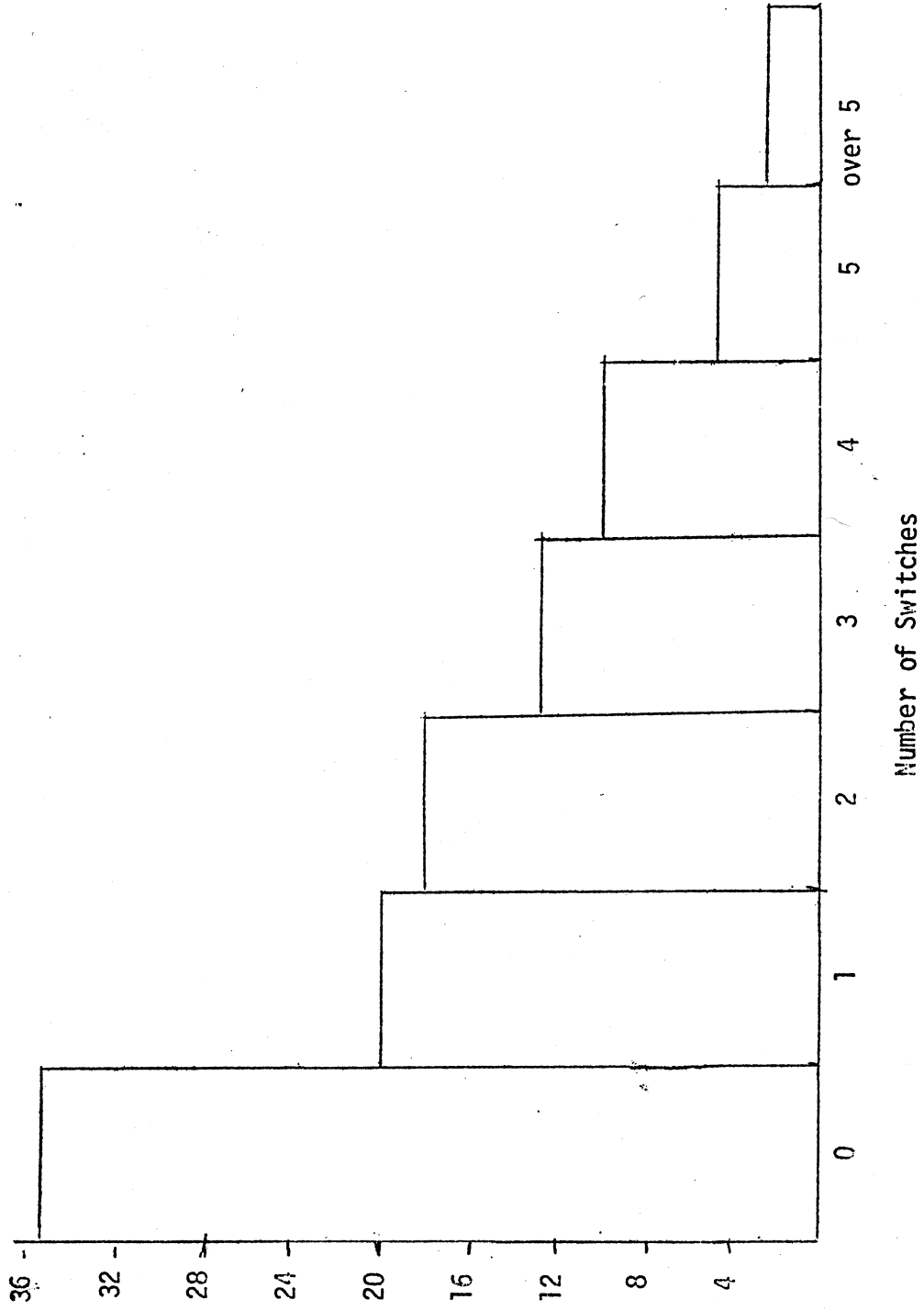


Figure 3. Percent of Farmers Reporting Various Number of Switches in Seed Corn Brands over the Period 1970-1972

Table 4. Reasons Given for Brand Switch

Reasons for Brand Switch	Number of Farmers Giving Reason
Brand	
Observed a better brand	10
Dissatisfied with old brand	5
Couldn't get old brand	7
Try new brand	7
Price	2
Dealer	
Dissatisfied with old dealer	1
Dealer came to sell	2
Became dealer myself	1
Dealer changed brands	1

included in the questionnaire. The responses to these questions are shown in Table 5.

The first situation-action question dealt with the farmer's reaction to a ten percent price change in his favorite brand. Given this change only 12 percent of the sample indicated that they would definitely switch to another brand entirely. The remaining farmers in the sample were more or less evenly split between continuing to purchase their favorite brand, and dividing their purchase with another brand.

In the second question, the farmers were given a situation where their regular dealer decided to arrange brands. The responses to this question indicated that only 8.5 percent of the farmers would switch brands entirely to continue to do business with the old dealer; 21.6 percent of the farmers would switch dealers to continue to purchase their old brand; and

Table 5.. Reaction to Situation--Action Questions.

Situation	Continue to Purchase X Exclusively	Switch Entirely to Y	Purchase Some X and Some Y
<p>You have been purchasing Brand X seed corn for years. The price of brand X has been about average compared with the other major brands, but all of a sudden this year it is ten percent higher than the other brands. You are unable to detect any significant improvement in the quality or service of Brand X. What would you do?</p>	30.9	12.0	41.2
<p>You have been purchasing Brand X seed corn for years from Mrs Jones, a corn dealer a few miles from your home. You and Jones, in addition to doing business with each other, are also good friends. Suddenly Jones decides to stop handling Brand X and start selling Brand Y. You think that Brand Y is as good as Brand X buy you have never tried it. What would you do?</p>	21.6	8.5	69.9
<p>Assume that the same situation as above except Jones doesn't quit handling Brand X, but merely moves to a new location 25 miles away. What would you do?</p>	48.4	42.5	8.5

69.9 percent would solve the problem by purchasing both their old brand and the new brand carried by their old dealer.

When the situation in the second question was changed so that the regular dealer didn't change brands, but merely moved to a new location 25 miles away, the response of the farmers changed considerably. Given this situation 48.4 percent of the farmers would continue to purchase from their regular dealer, 42.5 percent would switch dealers and brands, and only 8.5 percent would split their purchases.

#### SHOPPING BEHAVIOR

Shopping behavior, in the context of this research, deals with the extent to which farmers engage in activities which will permit them to adequately compare alternative dealers and brands prior to making a purchase. As such, shopping is an evaluative activity which demands some commitment on the part of the farmer.

The shopping behavior of farmers in purchasing seed corn was rather thoroughly analyzed in this research. Three aspects of this type of behavior were identified and studied. These were searching activities, shopping time, and shopping area. Each of these aspects is discussed in the remainder of this section.

#### Searching Activities

A basic feature of shopping is the searching activities used by potential purchasers in their process of identifying and evaluating alternative products. While these activities can take many forms, they essentially involve the search for relevant information concerning per-

formance characteristics, useage, price, availability, etc. of alternative brands of the product. In addition, another common characteristic of these activities is that they demand some commitment of time, effort, and perhaps expense on the part of the purchaser.

In this research, six searching activities were identified and defined. These were: attending company or university field days, planting on-farm test plots to compare different varieties and brands, checking yields from each variety planted on the farm, contacting seed dealers, seeking the advice of neighbors and friends, and consulting the OHCPTA before placing an order. The extent to which farmers engaged in these activities is shown in Table 6.

One method by which farmers can obtain information on brands and varieties of seed corn is by attending field days sponsored by either seed firms or universities. These events provide the farmer with an opportunity to observe various varieties and brands and compare one with the other. In addition, they also provide an opportunity for farmers to discuss certain matters concerning seed corn varieties and production problems with seed specialists. Despite these advantages, only 23.5 percent of the farmers in the survey attended one or more field days during the previous year, and only 5.9 percent of the farmers attended two or more field days.

Another method of obtaining information for the evaluation of seed varieties and brands is by contacting local dealers. In most instances these local dealers are simply other farmers in the community who are franchised to sell a particular brand of seed. Thus they act as agents

b1

Table 6. Extent to Which Sample Farmers Engage in Searching Activities in Purchasing Seed Corn

Response	Attend Field Days (percent)	Plant Test Plots (percent)	Check Variety Yields (percent)	Contract Seed Dealers (percent)	Seek Friends Advice (percent)	Consult OHCPTR (percent)
Yes	23.5	21.5	45.0	57.0	42.0	63.5
No	76.5	78.5	55.0	43.0	58.0	36.5

v



in local communities for major seed firms. While in most cases these dealers are not specialists in seeds, they are somewhat familiar with the characteristics of the varieties they sell. In addition they have a stock of brochures and manuals supplied by the firm they represent to pass on to farmer customers; and, since they reside in the community, they serve as a readily accessible source of information. The sample farmers were asked whether or not they contacted these seed dealers, and if so, the number they contacted. Responses to this question indicated that 43.0 percent of the farmers did not contact any seed dealer during the past year while 57.0 percent contacted at least one dealer during this same time period. Of those farmers contacting dealers, 31.4 percent contacted one dealer, 15.7 percent two dealers, 5.9 percent three dealers, 2.6 percent four dealers, and 1.3 percent five dealers.

The farmers were also questioned concerning the number of dealers and salesmen that contacted them, and the number of these people they purchased from. Since these activities do not require initiative on the part of the farmer, they cannot be considered as searching activities. Yet they are related to shopping behavior and will be considered at this point. The responses of the farmers to these questions are shown in Table 7.

The data in Table 7 shows that the majority of farmers were contacted by at least one dealer during the past year. Only 22.9 percent of the farmers reported that they had not been called upon by a seed corn dealer. The average farmer in the sample reported 2.1 dealer calls. Similarly, the majority of farmers who were contacted by dealers purchased seed from at least one of these dealers.

Table 7. Percentage of Farmers Reporting Dealer and Salesman Calls

Number of Contacts or Purchases	Percentage of Farmers Reporting			
	Dealer Contact	Dealer Purchase	Salesman Contact	Salesman Purchase
0	22.9	35.3	84.3	92.8
1	19.6	28.8	9.8	5.9
2	19.6	20.3	0.7	0.7
3	17.0	10.5	2.6	0.7
4	11.8	2.0	0.0	0.0
5	5.2	3.3	1.3	0.0
Over 5	4.0	0.0	1.3	0.0
Mean	2.1	1.2	0.3	0.1
Standard Deviation	1.9	1.3	1.0	0.4

The average farmer purchased seed corn from 1.2 dealers who called upon him. This data indicates that dealer calls are a rather effective marketing tool in selling seed corn. Based upon these results, a dealer could expect to make a sale at approximately every other farm he would visit.

The majority of the farmers indicated that they had not been called upon by a seed salesman in the past year. Only 15.7 percent of the farmers reported at least one salesman's visit during this period of time. In addition, only 7.3 percent of the farmers indicated that they purchased from one or more salesmen. While the number of salesman's calls is substantially lower than the number of dealer calls, it is apparent that the probability of a salesman making a sale on any particular call is approximately the same.

It is also possible for farmers to obtain information on seed corn varieties and brands by visiting with their neighbors and friends. Since it is likely that other farmers in the area planted different varieties and brands, by discussing the performance of all of these products farmers would obtain additional evaluative information. Only one aspect of this process of information exchange was explored in conjunction with the searching process. This dealt with whether or not farmers would seek the advice of their neighbors and friends before making their seed corn purchase. In the sample of farmers 42.0 percent said that they did seek the advice of other farmers before ordering their seed corn. The remaining 58.0 percent made this decision without the counsel of friends.

Farmers can also obtain evaluative information by careful observation of the performance of varieties and brands they plant on their farms. Two

types of observation are particularly relevant in the case of seed--planting small test plots and checking individual variety yields. A test plot is a small tract of land set aside to grow a few rows each of several varieties and brands of seed corn under identical conditions so that differences can be easily observed. Approximately 21.5 of the farmers in the sample indicated that they did plant test plots and measure certain performance characteristics of the varieties and brands included. Most of these test plots were small. The average number of varieties included in a test plot was 6.16 while the average number of brands was 2.26. Thus in general, the farmers who did plant test plots would evaluate approximately two brands of seed, and within each brand, three varieties. The farmer with the largest test plot evaluated twenty varieties and five brands.

A second method of obtaining on-farm performance data is through accurately measuring the yields of individual varieties at harvest. While this is not a particularly difficult task, it does require that the farmer know exactly where each variety is planted, and furthermore, that he has some method of determining the yield of each. Forty-five percent of the farmers indicated that they did measure yield by variety.

A final, and very objective method of searching for evaluative information, is the use of the OHCPT. This document, published by the Ontario Corn Committee, summarizes the results of an extensive testing program of the commercial hybrids sold in Ontario. The information in the publication for each hybrid includes: percentage broken stalks at harvest, percentage moisture at harvest, and the acre yield of shelled corn. Because it is performed by independent agencies in a scientific and objective manner,

it represents an important source of information for seed corn purchasers. An effort was made in this research to establish the incidence of its use in providing evaluative information. The responses of farmers indicated that 63 percent consulted this document prior to making their seed corn purchase decision.

#### Shopping Time

Another important dimension of the shopping behavior of farmers is the time spent in shopping around for alternative dealers and brands. This activity has two dimensions--first, the actual hours or days the farmer actively spends in making an evaluation, and second, the deliberation time, or the period of time between when the farmer actually begins to consider the purchase, and the time when the purchase is made. Both of these dimensions are extremely difficult to measure accurately. Only the second consideration, the deliberation time, was considered in this research.

To get a rough idea of the length of the deliberation time used by farmers in purchasing seed corn, each farmer was asked the following two questions

In what month do you seriously begin to think about ordering your seed corn for the next season?

When do you actually place your seed corn order?

The difference between the two time periods was considered to be the length of the deliberation period.

Responses to the above questions indicated that the deliberation time for seed corn purchases is short. Sixty-eight percent of the farmers indicated that they ordered in the same month as they first began to seriously consider this purchase; 20.3 percent of the farmers reported a

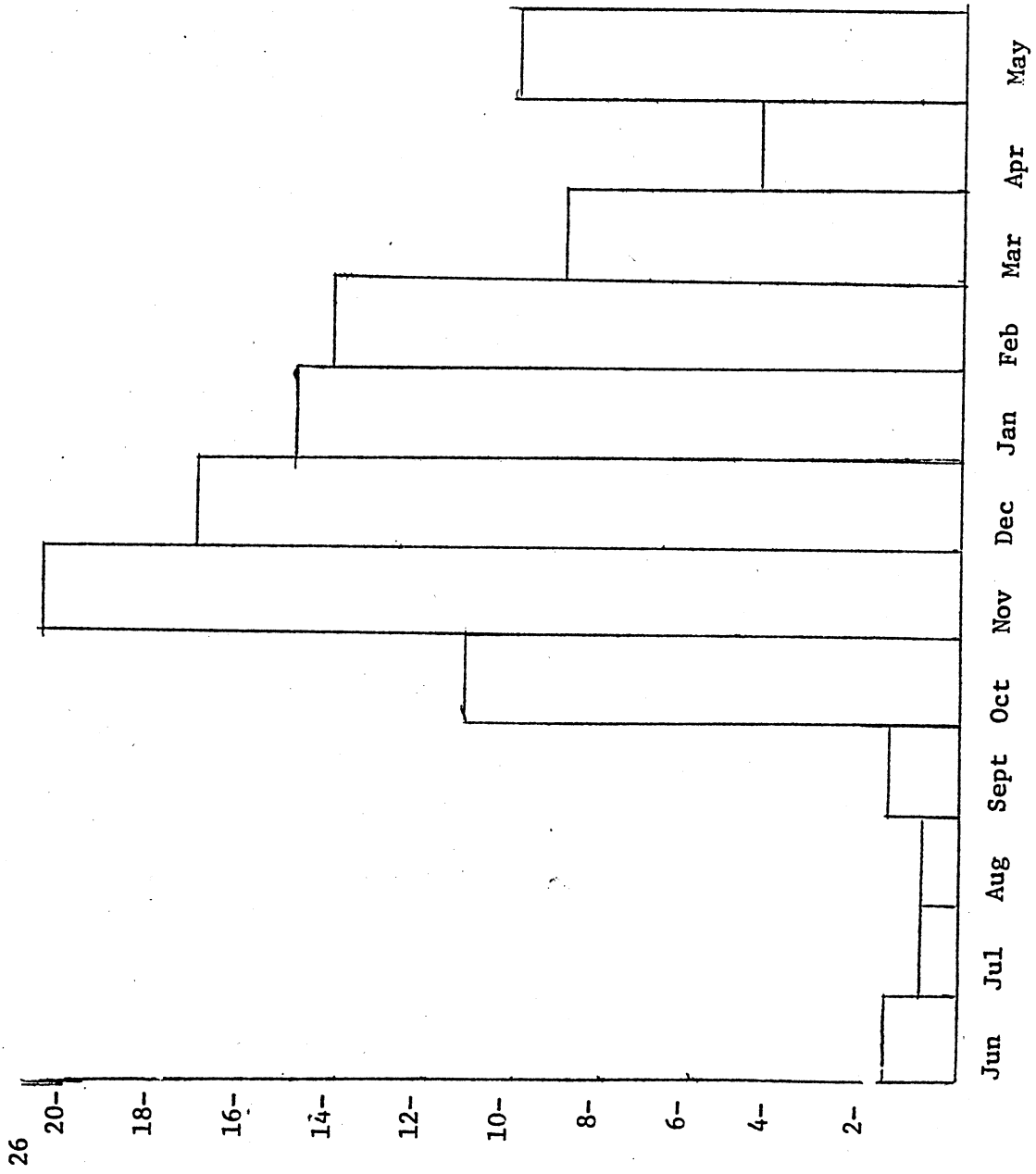
deliberation time of one month; and the remaining 11.8 percent reported deliberation times of two months or more.

Responses to the second question provide an indication of the month in which farmers purchase seed corn. This information is presented in Figure 4. From this illustration it can be seen that while some purchases are made in every month of the year, most of the purchasing is done in the Fall and Winter months.

#### Shopping Area

Related to the shopping activities of farmers is the size of the shopping area. In this research this size was measured in two ways. The first measure is called the potential shopping area. Farmers were asked to list all of the seed corn dealers they could, and for each dealer, indicate his distance from the farm. The average of these distances for each farmer was then taken as a measure of his potential shopping area. The average size of the potential shopping area for the sample was computed to be 6.18 miles. This means that the average seed corn purchaser is aware of dealers within a 6.18 mile radius of his farm. The percentage distribution of farmers aware of dealers over several distances is shown in Table 8. This data indicates that while the average farmer has a relatively confined potential shopping area, there is a sizeable group which has a much wider potential area.

The second measure of size might be called the actual shopping area, or more accurately, the purchasing area. In calculating this measure, only the distances to dealers the farmer purchased from were used. In this manner, the average size of the actual shopping area was determined to be 5.22 miles.



Month Order was Placed

Figure 4. Percentage of Farmers Ordering Seed in Each Month

Table 8. Percentage Distribution of Farmers Aware of Dealers at Various Distances from the Farm.

Miles From Farm	Percentage of Farmers Aware of Dealers	Percentage of Farmers Purchasing
1-2	2.7	17.1
3-4	21.5	34.9
5-6	37.3	23.9
7-8	22.2	13.7
9-10	8.5	5.5
11-15	6.5	4.2
16-20	1.3	0.7



As expected, the actual shopping area proved to be smaller than the potential area. The percentage distribution of farmers purchasing from dealers located at various distances from the farm is shown in Table 8. When compared with the awareness distribution it can be seen that there is a definite tendency for farmers to purchase their seed corn close to home.

While the above analysis establishes the fact that farmers tend to purchase close to home, a remaining question is: Do they simply purchase close to home, or do they tend to buy from the closest source? The data was analyzed further to cast some light on this question. Results of this analysis showed that 25.5 percent of the farmers purchased all of their seed corn from the closest source, 45.3 percent purchased some from the closest source, and the remaining 29.2 percent failed to purchase any from the nearest dealer.

#### AWARENESS

An important variable in the analysis of farmer buying behavior is the awareness of alternative dealers and brands. This variable has obvious importance from the point of view of the seller of farm supplies in the sense that awareness of any brand is a necessary prerequisite for its purchase. Thus if the awareness of any brand is low, measures to increase this level of awareness will be necessary in order to insure the success of any marketing program designed to increase sales. It is also important from the point of view of the buyers of farm supplies in the sense that it indicates the extent of their knowledge of alternatives.

The variable awareness has two important dimensions. The first dimension is dichotomous and could be determined by asking the buyer

"Have you ever heard of brand x." An affirmative answer to this question indicates that the buyer has some level of awareness, while a negative reply indicates no awareness is present. The second dimension is more or less continuous and is a matter of degree. Assuming the buyer has at least a "heard of" degree of awareness, the second dimension is concerned with the level of this awareness. Thus this second dimension includes a greater knowledge component.

Both dimensions of awareness were explored to some extent in this research. To get a measure of the first dimension, the sample farmers were given a list of the names of all the brands of seed corn available for sale in Ontario in 1972. On this list they were asked to indicate those brands they had previously heard of, even though they had never used them. An analysis of the responses to this question is shown in Table 9. The data in this table shows that all of the farmers were able to identify at least three alternative brands of seed corn; a small group could identify three to eight brands; a very large group were aware of nine to fourteen brands; and a small group knew of fifteen or more brands of seed corn. The average number of brands which could be identified by the sample was 11.2 brands, or slightly over one-half of all the brands available for sale.

To explore the awareness issue in greater depth, for each of the brands they previously identified, the farmers were asked to give the name and distance of a dealer from whom they could purchase that brand. Obviously, to be able to identify a specific dealer for a brand requires a much greater degree of awareness than simply indicating they had heard of that brand. An analysis of the responses to this question is shown in Table 9. This

Table 9. Farmers' Awareness of Seed Corn Brands and Dealers

Number	Percentage of Farmers Identifying Indicated Number of Brands	Percentage of Farmers Identifying Indicated Number of Dealers
1-2	0.0	10.4
3-4	0.7	19.7
5-6	7.8	26.8
7-8	10.5	23.5
9-10	24.9	11.7
11-12	20.9	4.6
13-14	22.2	2.7
15-16	8.5	0.7
17-18	3.3	0.0
Over 18	1.4	0.0

data shows that most farmers could identify less than six dealers selling seed corn in their community; a sizeable group could name seven to ten dealers; and a very small group could specify eleven or more dealers. The average number of dealers the farmers could name was 6.20, or approximately one dealer for every two brands they could recognize.

A final measure of awareness in this research was obtained through the use of a slogan and variety recall test. For this test nine very common variety designations and six widely used advertising slogans were assembled from various sources. The advertising slogans used for this purpose were:

"More Farmers Plant.....Than Any Other Brand"

"Seedsmen to the World"

"Go with the Leaders"

"Grow with....."

"Total Crop Programs"

"Plant All You Can Get"

And the variety designations were:

SX44	G4444	SL416
PX20	3909	XL45A
R381	5265	2606

The slogans and designations were mixed together on a sheet of paper. This sheet was given to the farmer and he was asked to identify the brand name associated with each. This did not prove to be an easy task for most of the respondents. The data in Table 10 shows that almost one-third of the farmers could not assign any of the slogans or designations to the correct brands; another third could associate one or two correctly; and

Table 10. Distribution of Scores on Slogan Test

Number Correct on Slogan Test	Percentage of Farmers
0	29.4
1-2	32.0
3-4	24.9
5-6	8.5
7 or more	5.3

a final third could associate three or more. The maximum number any farmer could associate was nine, and the average for the sample was 2.22.

#### SOURCES OF INFORMATION

In selecting their brand of seed corn, Ontario farmers have several sources of information at their disposal. These sources range from the highly objective Ontario Hybrid Corn Performance Trials Report to the informal visits of farmers with their neighbors and friends. In between are such sources as: seed dealers and salesmen, literature from seed companies, custom operators, agricultural representatives, university personnel, and advertisements in farm magazines, local newspapers, and on radio and T.V.

An attempt was made in this research to determine the importance of each of the above information sources in helping a farmer select his brand of seed corn. Farmers were asked to evaluate each information source on a five point scale with responses categorized and coded as: (1) not important,

(2) somewhat unimportant, (3) neither important nor unimportant, (4) somewhat important, and (5) extremely important. The results of this evaluation are shown in Table 11. In this table, the information sources are arrayed from high to low importance based upon their mean score.

The results in Table 11 show that three information sources clearly emerge as being of primary importance to farmers in their seed corn brand selection process. These sources are neighbors and friends, the Ontario Hybrid Corn Performance Trials Report, and seed dealers. The mean scores for these sources indicate that, on the average, they are considered to be important in the seed corn brand selection decision. This is an interesting result in the sense that all three of these information sources are readily accessible and relatively objective. In the case of neighbors and friends, farmers obtain useful information by exchanging relevant information on several performance characteristics of the brands and varieties each has planted, and, perhaps of greater importance, by actually observing this performance on each other's farms. The fact that this performance can be observed would tend to make this information source fairly objective. The same is more or less true in the case of seed dealers. Since the majority of these dealers are simply 'other farmers', it is likely that the information they provide is considered as being relatively objective for the same reason that was mentioned above. In the case of the OHCPTR, because of the rigorous manner in which the data for this report is collected and analyzed, it too can be considered as a relatively objective information source.

The next group of five sources of information was generally considered to be neither important nor unimportant to the sample farmers. This

Table 11. Farmer Evaluation of Various Sources of Information

Information Source	Mean Score	Standard Deviation	Percentage of Farmers Responding to Each Category				
			Not Important	Somewhat Unimportant	Neither	Somewhat Important	Extremely Important
Neighbors and Friends	3.57	1.32	13.7	7.8	11.8	40.5	26.1
Ontario Corn Performance Trials Report	3.57	1.58	21.6	4.6	10.5	21.6	41.8
Seed Dealers	3.44	1.46	19.0	7.8	11.8	32.7	28.8
Literature from Seed Companies	2.84	1.45	29.4	11.8	18.3	26.8	13.7
Agricultural Representatives	2.70	1.60	39.9	8.5	11.8	21.6	18.3
Custom Operators	2.67	1.49	35.3	9.2	9.8	35.9	9.8
Seed Salesman	2.22	1.50	52.3	7.2	12.4	16.3	10.5
University Personnel	2.18	1.55	57.5	4.6	11.1	13.1	13.1
Farm Magazine Advertisements	2.00	1.29	54.9	14.4	9.8	17.6	3.3
T.V. and Radio Advertisements	1.64	1.09	68.6	8.5	12.4	7.8	2.0
Local Newspaper Advertisements	1.63	1.12	69.9	12.4	6.5	7.2	3.9

group consists of literature from seed companies, agricultural representatives, custom operators, seed salesmen, and university personnel. In general, the sources in this group could be considered to be either biased, not readily accessible, or not knowledgeable. Thus it is reasonable that they should receive lower overall ratings.

The final three information sources were considered to be not important by the sample farmers. These three sources--farm magazine advertisements, T.V. and radio advertisements, and local newspaper advertisements--because they are directed at the farm audience by seed firms, might very well be considered as being biased, hence not considered to be important sources for information useful in the brand selection decision.

While it is important to consider the mean scores for each of the eleven information sources as general measures of their importance, it is also useful to consider the variability in the farmers' evaluations of these sources. This information is shown in Table 11 by the standard deviations and the percentage of farmers responding to each category.

In all cases, the standard deviations for the various information sources are fairly high. This means that while the overall rating for any particular source might be either high or low, there is a considerable amount of variation in the opinions of the sample farmers. For example, in the case of the OHCPTR, even though it received a very high overall rating, still a sizeable group of farmers feel that this report is not important in their brand selection decision. When the standard deviation is lower, as in the case of the three forms of advertising, there is greater agreement among the farmers as to the importance of these sources.



## PRODUCT, DEALER, AND COMPANY CHARACTERISTICS

When purchasing any production input, it is clear that farmers do not simply purchase some simple, unidimensional product, but instead, the product they purchase is complex and multidimensional, and might best be described as being a "bundle of attributes or characteristics." At minimum, this "bundle of attributes" would include a large number of product, dealer, and company or brand characteristics.

In this research, an attempt was made to delineate the importance of a large set of product, dealer, and company characteristics for seed corn. For each characteristic, the farmers were asked to make an evaluation on a five point scale with responses categorized and coded as: (1) not important, (2) somewhat unimportant, (3) neither important nor unimportant, (4) somewhat important, and (5) extremely important. The respective product, dealer, and company characteristics which were included in the evaluation were determined on the basis of a review of past research, discussions with farmers and seed company executives, and the results of the pretest.

### Product Characteristics

The sixteen product characteristics considered in this research are shown in Table 12. Most of these characteristics are fairly technical in nature and pertain to important performance features of seed varieties. As is evident in this table, all but one of the product characteristics considered were judged to be important by the sample of farmers. The sole characteristic judged to be unimportant was the package or container in which the seed is sold. Two other non-technical product characteristics--well known and low price--although considered to be somewhat important, were rated substantially lower than the more technical product characteristics.

Table 12. Evaluation of Product Characteristics

Product Characteristic	Mean Score	Standard Deviation	Not Important	Percentage of Farmers Responding to Each Category			
				Somewhat Unimportant	Neither	Somewhat Important	Extremely Important
Yield	4.92	0.34	0.0	0.0	2.0	4.6	93.5
Standability	4.87	0.45	0.7	0.0	0.7	9.2	89.5
Grain Quality	4.73	0.60	0.0	2.0	2.0	17.6	78.4
Seedling Vigor	4.64	0.71	1.3	0.0	5.9	19.0	73.9
Tolerance to Stress	4.56	0.73	1.3	1.3	2.6	29.4	65.4
Uniformity in Maturing	4.53	0.86	2.6	1.3	4.6	23.5	68.0
Tolerance to Insects	4.35	0.97	2.6	3.3	10.5	24.2	59.5
Ear Retention	4.33	0.95	2.6	3.9	6.5	32.0	54.9
Dry Down Rate	4.08	1.34	9.2	2.6	10.5	20.3	56.2
Ease of Husking	4.05	1.37	13.1	2.6	4.6	26.1	53.6
Test Weight	3.98	1.40	10.5	4.6	9.2	21.6	52.9
Seed Sizing	3.77	1.46	13.7	3.9	13.7	22.9	44.4
Appearance in the Fields	3.71	1.33	13.1	5.2	13.1	34.6	34.0
Well Known	3.39	1.45	17.6	7.8	18.3	26.8	28.8
Low Price	3.11	1.61	26.8	8.5	13.7	22.2	27.5
Package or Container	2.25	1.46	49.7	5.9	17.6	16.3	9.2

An inspection of the standard deviations and percentage of farmers responding to each category shows that for some items there is a fair amount of agreement among the sample farmers, while for other items there is very little agreement. In general, for those items receiving the highest ratings the standard deviations are lower, hence the extent of agreement is higher.

#### Dealer Characteristics

The dealer characteristics evaluated in this research are shown in Table 13. Of the fifteen characteristics included in the evaluation, seven were considered to be relatively important, while eight were judged to be relatively unimportant. In general, these results indicate that farmers prefer a dealer who is honest and reliable, provides good service, has adequate product information, is easy to deal with, takes time to discuss problems, and is nearby. Three other factors--good friend, carries a full line of farm seeds and outstanding farmer--although receiving relatively low overall ratings, were considered to be important by a sizeable group of farmers. The remaining dealer characteristics--aggressive seller, community leader, sells other farm supplies, has custom planting service, and relative--were all judged to be rather unimportant.

#### Company Characteristics

Thirteen company characteristics were evaluated by the sample of farmers. The results of this evaluation are shown in Table 14. In general, ten of these characteristics were considered to be relatively important, while only three received low importance ratings. The fact that the company is perceived as being trustworthy and honest is of primary importance in the farmer's evaluation of a brand. These factors are followed closely by the

Table 13. Evaluation of Dealer Characteristics

Dealer Characteristic	Mean Score	Standard Deviation	Not Important	Percentage of Farmers Responding to Each Category			
				Somewhat Unimportant	Neither	Somewhat Important	Extremely Important
Honest	4.72	0.71	2.0	0.0	3.3	13.7	81.0
Provides Good Service	4.61	0.73	2.0	0.0	2.6	26.1	69.3
Reliable	4.59	0.81	1.3	1.3	3.9	22.2	71.2
Has Adequate Information About this Product	4.43	0.97	4.6	1.3	3.3	28.8	62.1
Easy to Deal With	4.33	0.92	2.0	4.6	5.9	33.3	54.2
Takes Time to Discuss My Problems	4.29	0.89	2.6	2.6	5.9	41.2	47.7
Nearby	3.29	1.51	22.9	7.2	15.7	27.5	26.8
Good Friend	2.94	1.54	31.4	5.2	22.2	20.3	20.9
Carries Full Line of Farm Seeds	2.89	1.62	35.3	7.2	14.4	19.6	23.5
Outstanding Farmer	2.80	1.57	35.3	5.2	20.3	19.0	19.6
Aggressive Seller	2.10	1.43	54.2	7.2	17.6	9.8	9.8
Community Leader	2.09	1.40	52.3	7.2	20.3	9.8	8.5
Sells Other Farm Supplies	1.89	1.27	62.7	4.6	18.3	9.8	4.6
Has Custom Planting Service	1.72	1.23	69.9	4.6	13.7	6.5	5.2
Relative	1.50	0.90	74.5	4.6	18.3	2.0	0.7

Table 14. Evaluation of Company Characteristics

Company Characteristics	Mean Score	Standard Deviation	Percentage of Farmers Responding to Each Category				
			Not Important	Somewhat Unimportant	Neither	Somewhat Important	Extremely Important
Trustworthy	4.76	0.47	0.0	0.0	2.0	19.6	78.4
Honest	4.69	0.76	0.7	1.3	3.9	13.1	80.4
Good Research Program	4.53	0.90	3.9	0.7	2.6	24.2	68.6
Has Adequate Product Information	4.46	0.85	2.6	0.7	5.9	30.1	60.8
Good Dealers	4.30	0.95	3.3	3.9	3.3	38.6	51.0
Has Wide Range of Varieties	4.03	1.20	8.5	2.0	6.5	41.2	41.2
Modern Facilities	3.58	1.48	18.3	4.6	15.0	24.8	37.3
Well Known	3.46	1.40	19.0	2.0	19.6	32.7	26.8
Canadian Owned	3.34	1.46	21.6	3.3	22.2	25.5	27.5
Good Salesmen	3.02	1.44	26.1	7.2	20.9	30.1	15.7
Has Liberal Credit Policies	2.68	1.53	39.2	3.3	19.0	24.2	13.7
Produces Full Line of Farm Seeds	2.56	1.46	39.2	6.5	26.8	13.7	13.7
Large Company	2.48	1.37	37.9	12.4	20.9	21.6	7.2

farmer's perception of the research program carried out by the firm, the adequacy of product information, the quality of dealers, and the range of varieties sold by the firm. Of some, but lesser importance were modern facilities, well known, Canadian owned, and good salesmen. The credit policies of the firm, its product line, and its size were all factors rated somewhat unimportant by the sample of farmers.

#### ATTITUDES

At the conclusion of each interview, the farmers were asked to respond to a series of attitude statements dealing with several aspects of their buying behavior in general, and of their seed corn buying behavior in particular. These statements were presented to the farmers in random order and each farmer was asked to indicate his degree of agreement with each statement. The responses were categorized and coded as: (1) Definitely Disagree, (2) Generally Disagree, (3) Neither Agree nor Disagree, (4) Generally Agree, and (5) Definitely Agree. The farmers' responses to these questions are shown in Table 15. The questions are listed in this table in descending order of agreement.

The statement receiving the greatest agreement was that there are major differences among brands of seed corn. Over 51 percent of the sample farmers indicated that they definitely agreed with this statement. This attitude was further substantiated by the response to question 28 which suggested that all brands of seed corn were approximately the same with the main difference being associated with dealer services. The high percentage of farmers disagreeing with this statement indicates that farmers perceive most of the difference as being associated with brands, and not dealers. Despite the general

Table 15. Farmers' Responses to Attitude Questions

Opinion Question	Percentage of Farmers Responding to Each Category						
	Mean Score	Standard Deviation	Definitely Disagree	Generally Disagree	Neither	Generally Agree	Definitely Agree
1. There are major differences between brands of seed corn.	4.11	1.12	4.6	3.9	17.6	22.9	51.0
2. I like to buy my seed corn from a company that is well known.	4.03	0.97	3.3	3.9	14.4	43.1	35.3
3. I keep away from unfamiliar brands.	3.84	1.35	11.1	6.5	7.8	32.7	41.2
4. I am always happy to discuss my seed corn program with dealers and salesmen..	3.83	1.11	7.2	4.6	13.7	47.1	27.5
5. For most farm supplies I tend to use the brands which are most popular.	3.81	1.03	4.6	4.6	22.2	41.8	26.8
6. The price of seed corn is unreasonable high.	3.76	1.22	5.9	9.2	26.1	20.3	38.6
7. I will consider buying seed corn from a salesman only if I know him personally and have confidence in him.	3.54	1.30	10.5	11.8	19.0	30.7	28.1
8. Whenever possible I like to buy most of my farm supplies from the same dealer.	3.51	1.34	13.1	11.1	14.4	34.6	26.8
9. The information provided by seed companies concerning product characteristics and uses is generally satisfactory.	3.49	0.90	6.5	7.2	26.8	49.7	9.8
10. I prefer to buy my seed corn from farmer dealers rather than store dealers.	3.38	1.20	9.8	7.8	38.6	21.6	22.2
11. I seldom or never buy seed corn from a company salesman because I prefer to buy from a farmer dealer.	3.35	1.37	13.7	11.1	24.2	24.8	25.5
12. I am the kind of person who makes up his mind on what brand to buy and then sticks with that brand for a number of years.	3.26	1.47	19.0	15.7	11.1	28.8	25.5
13. The "Ontario Hybrid Corn Performance Trials Report" is the only reliable source of information about brands of seed corn.	3.22	1.33	15.7	11.8	28.8	22.9	20.9
14. I enjoy visiting with dealers and salesmen.	3.17	1.36	17.6	9.8	25.5	28.1	18.3
15. I make it a point to read advertisements for seed corn.	3.11	1.30	19.6	9.2	23.5	35.9	11.8

Percentage of Farmers Responding to Each Category

Opinion Question	Mean Score	Standard Deviation	Percentage of Farmers Responding to Each Category				
			Definitely Disagree	Generally Disagree	Neither	Generally Agree	Definitely Agree
16. My neighbors and friends usually give me good advice on what brand of farm supplies to buy.	3.08	1.24	17.0	11.1	29.4	31.4	11.1
17. A farmer can save a lot of money by looking around for the best deals.	3.03	1.50	22.9	15.0	19.0	19.6	22.9
18. I enjoy shopping around for farm supplies.	3.03	1.45	22.2	15.0	21.6	19.6	21.6
19. A lot of advertising done by seed companies is misleading.	3.02	1.09	7.8	21.6	43.1	15.0	12.4
20. It is fairly easy to judge the performance of different brands of seed corn.	2.89	1.29	19.6	20.9	19.0	31.4	9.2
21. I like to plant several different varieties of seed corn to reduce the risk of getting a poor one.	2.86	1.48	26.8	17.0	19.0	17.6	19.6
22. I feel that much of the buying of farm supplies that I do is based on habit.	2.86	1.35	22.2	19.6	20.9	24.2	13.1
23. I will consider buying seed corn from any salesman who convinces me that he has a good product and can show me how it fits into my operation.	2.59	1.44	34.6	16.3	16.3	20.3	12.4
24. I try different brands of seed corn more often than my neighbors.	2.47	1.36	35.9	14.4	26.1	13.7	9.8
25. My choice of brands for many farm supplies is influenced by the advertising I see or hear about these products.	2.46	1.29	29.4	21.6	23.5	17.6	6.5
26. Information I get about seed corn from company advertising is more reliable than what I get from a dealer.	2.41	1.19	26.1	24.2	33.3	8.5	6.5
27. I like to change brands of seed corn frequently.	2.23	1.20	34.0	28.8	19.0	13.1	4.6
28. All brands of seed corn are approximately the same. The major difference is in terms of the type and extent of dealer services associated with each brand.	2.18	1.22	39.2	25.5	19.0	10.5	5.9
29. Before deciding upon my purchase of seed corn I frequently check ads in farm magazines.	2.05	1.19	45.8	21.6	17.6	11.1	3.9
30. I usually look for the lowest possible price when buying seed corn.	1.91	1.12	49.0	25.5	13.7	8.5	3.3



attitude that major differences exist among brands, the low response to question 20, that is fairly easy to judge the performance of brands, indicates that a sizeable group of farmers have difficulty detecting these differences. The feeling is that differences exist, even though they are difficult to observe.

Another strong attitude on the part of farmers appears to be that they prefer to purchase from a well known company. The responses to questions 2,3, and 5, all related to this basic attitude, substantiate this feeling. Farmers prefer a brand that is well known and popular, and they tend to shy away from unfamiliar brands.

The farmers also expressed general agreement with question 4 that they were always happy to discuss their seed corn program with dealers and salesmen. Indeed, the response to question 14 indicates that most farmers like visiting with dealers and salesmen. However, questions 10 and 11 indicate that most farmers prefer to purchase from farmer dealers rather than store dealers or company salesmen. The responses to questions 7 and 23 indicate that while most farmers will consider buying from a salesman only if they know him personally and have confidence in him, they will not buy from him just because he demonstrates that he has a good product. The favorable response to question 8 demonstrates that a majority of farmers like to buy most of their farm supplies from the same dealer whenever possible.

In general, the farmers tended to agree with the statement in question 9 that the information currently being provided by seed companies concerning product characteristics and uses is satisfactory. However, the fact that only a small group definitely agreed with this statement would indicate that

apparently there is considerable room for improvement. The sample also tended to agree with the statement that the OHCPTTR is the only reliable source of information about brands of seed corn. However, despite this overall agreement, a sizeable group of farmers either disagreed or had no opinion on this statement. This result suggests that many farmers may not perceive this report as being highly reliable.

Several questions related to advertising were included. While most farmers responded somewhat favorably to statement 15 that they make it a point to read advertisements for seed corn, they responded unfavorably to statement 26 that advertising from seed companies was a more reliable source of information than seed dealers. In addition, most farmers reported that they did not specifically check seed corn ads prior to making their purchase. Furthermore, there was the general feeling among the farmers that they were not influenced by advertising for farm supplies. But again, it is important to notice in this context that a sizeable group of farmers held the opposite opinion. A fairly neutral response was evoked to the statement that a lot of the advertising done by seed companies is misleading.

The response to statement 18 shows that the sample is approximately evenly split between those who enjoy shopping for farm supplies and those who do not. The same is true of statement 17. About one-half of the sample feels that it is possible to save a lot of money by shopping around for farm supplies, whereas the other half feels that this is not possible.

In terms of brand switching, the majority of farmers agreed with statement 12 that they are the kind of person who makes up his mind on what brand to buy and then sticks with that brand for a number of years. This

attitude was further substantiated by the high proportion of farmers who disagreed with statement 27 that they like to change brands of seed corn frequently, and statement 24 that they try different brands of seed corn more often than their neighbors. Despite this general feeling among the farmers that they prefer not to change brands often, a large proportion of the farmers insisted that most of their buying was not done on the basis of habit.

Finally, in terms of price, the majority of the sample farmers agreed with statement 6 that the price of seed corn is unreasonably high. At the same time, all but a very small percentage of farmers disagreed with statement 30 that they usually look for the lowest possible price when buying seed corn.

#### SUMMARY AND CONCLUSIONS

This paper reports the descriptive results of research in the area of farmer buying behavior as it relates to seed corn. The data presented in this paper was gathered through a series of interviews with 153 southwestern Ontario farmers. The major elements of buying behavior considered include: brand selection; brand loyalty; shopping behavior; awareness; sources of information; product, dealer, and company characteristics; and attitudes.

Although the emphasis in this report has been on the descriptive characteristics of buying behavior, it is possible to develop some tentative conclusions from this exercise. In some cases further analysis of this data may dispute these tentative conclusions; in other cases it may strengthen them. In any event, it seems worthwhile to list them at this point.

Based on the evidence presented earlier, the following tentative conclusions have been developed:

1. The reasons given by farmers for selecting their primary brand of seed corn are many and varied. Of particular importance in this decision are the performance characteristics of the brands. These performance characteristics relate to both general and specific characteristics. For a smaller group of farmers, the personality, nearness, and service of dealers are important determinants in their purchasing decision. Still other farmers base this decision more on the references they get from their own observation and experience, and from other external sources.

2. The reasons given by farmers for selecting their secondary brand of seed corn are, to some extent, different from the reasons advanced for the primary brand. In the case of the secondary brand, while performance characteristics are still important to some farmers, the factors--favor to dealer, dealer relationship, and experimentation--appear to be dominant. Thus, while the primary brand apparently is purchased on the basis of fairly objective reasons, the secondary brand, in many cases, is purchased on the basis of somewhat more subjective reasons.

3. In purchasing farm supplies, southwestern Ontario farmers tend to purchase a greater number of brands of seed corn than of other major farm supplies. In many cases this is due to their practice of using several brands at one time rather than to constantly changing brands from one year to the next.

4. A sizeable group of farmers can be classified as highly brand loyal. This is evidenced by the fact that over one-third of the farmers did not change brands in the three year period under study. An even larger group, however, can be classified as not loyal. Approximately two-thirds of the farmers made one or more brand switches during the three years.

5. The reluctance to change brands of seed corn was demonstrated by the responses to situation-action type questions. Only a very small percentage of the farmers indicated they would change brands given either a ten percent rise in the price of their current brand, or a change in the brand handled by their regular dealer. This latter result indicates that the strength of brand loyalty is considerably higher than dealer loyalty.

6. The extent of farmer participation in six searching activities was determined in this research. For four of these activities--attend field days, plant test plots, check variety yields, and seek friends' advice--it was found that less than one-half of the farmers participated during the past year. In the case of the remaining two activities--contacting seed dealers and consulting the OHCPT--slightly over one-half participated. In the absence of similar data for other inputs, it is difficult to determine whether these results represent a high or a low level of searching. Nevertheless, it would seem that with less than half of the farmers participating in four of the activities, this would be an indication of a fairly low level of searching.

7. The average farmer in the sample was contacted by 2.1 seed dealers and purchased from 1.2 of these dealers. Thus the probability of making a sale following a contact for a dealer was determined to be approximately 0.5. Although salesmen's calls were less frequent, the likelihood of making a sale on any call was determined to be approximately the same. In both cases this probability seems high.

8. Most farmers spend very little time considering their seed corn purchase. Over two-thirds of the sample reported a deliberation time of less

than one month.

9. The majority of farmers place their seed corn orders in the late Fall and early Winter months. Very little seed corn is sold during the other months of the year.

10. In terms of potential and actual shopping areas it was found that most farmers shop and purchase fairly close to home for their seed corn. The average size of the potential shopping area was determined to be 6.18 miles. The size of the purchasing area was determined to be 5.22 miles. In addition, it was determined that a substantial amount of seed corn purchasing is done at the nearest source of supply.

11. The survey data shows that the level of awareness of seed corn brands for Ontario farmers is low. While the average farmer could identify approximately one-half of the brands currently available, he could name dealers for only half of the brands he had identified, and he was not familiar at all with common advertising slogans and variety designations.

12. Three sources of information appear to be of primary importance to farmers in their seed corn brand selection process. These sources are neighbors and friends, the OHCPTB, and seed dealers.

13. In general, farmers tend to consider technical product characteristics as being highly important in their brand selection process. Of particular importance are the yield potential and standability of the seed.

14. Farmers prefer a dealer who is honest and reliable, provides good service, has adequate product information, is easy to deal with, takes time to discuss problems, and is nearby.

15. In terms of company characteristics, farmers rate trustworthiness and honesty as being of primary importance in their evaluation of a brand. Other important factors include the farmer's perception of the research program of the firm, the adequacy of product information, the quality of dealers, and the range of varieties sold by the firm.

16. The feeling among farmers that there are major differences among brands of seed corn is strong. Furthermore, it is evident that these perceived differences are more in terms of brand characteristics than dealer characteristics.

17. Farmers prefer a brand that is well known and popular. In general, they tend to shy away from unfamiliar brands.

18. Most farmers agree that the information they are currently receiving from seed companies is adequate. However, despite the fact that they do make it a point to read seed corn ads in farm magazines, there was a general feeling among the farmers that they were not influenced by these ads.

19. There exists a sizeable group of farmers who enjoy shopping for farm supplies. In addition, a sizeable group feels that it is possible to save a considerable amount of money by shopping around.

20. Farmers tend to prefer to stick with the same brand for several years. Despite this fact, most farmers do not think their buying is based upon habit.

## IMPLICATIONS FOR SEED FIRMS

The results of the research reported in this paper have important implications for seed firm management. This section will discuss these implications with particular reference to the development of effective marketing strategies.

### Research and Testing

It seems clear from the results of this study that farmers are interested primarily in the performance characteristics of the brand and variety of seed corn they purchase. It is true that other factors, such as dealer and company characteristics, play an important role in the brand selection decision, but not to the same extent as the performance related variables. As a result, it would appear that in order to compete effectively, a firm must have varieties which perform reasonably well under normal field conditions. This, of course, implies that the firm has a well-developed research and testing program. Without such a program it is difficult to imagine how any seed firm could maintain its market share, let alone increase it.

Another dimension to the performance issue deals with the ability of farmers to detect differences among brands. Even though most farmers feel that differences exist, they also feel that in many cases it is difficult to detect them. Again these findings highlight the importance of the firm's research and testing program. In this case, however, it is the farmer's perception of the research program that is of greater importance than the actual program. Since farmers are not able to observe adequately the actual differences among brands, they look for other factors which are indicators of the performance of various brands. One of these other factors is their perception of the research program of the firm. If they perceive that a firm



has an outstanding research program, it is likely that they will also perceive the firm's products in the same manner. Thus while it is important for seed firms to establish and maintain good research and testing programs, it is also important that these programs are made visible to potential customers.

#### Distribution

The findings of this research also have implications for the establishment and maintenance of a sound distribution system. Currently, most seed corn in Ontario is sold through a system of franchised, farmer dealers. Although these dealers are not expert seed specialists, they seem to be preferred over more highly trained seed salesman by most farmers. In many cases this is due to the fact that the farmers know the dealers personally and can judge their honesty and reliability. In addition, since the dealer grows at least some of the seed he sells, other farmers can observe the performance of his product.

In choosing new or replacement dealers, a seed firm would be wise to have some strategy in mind with regard to the type of person selected and his location. The results of this study would tend to indicate that a dealer can be more effective if he is a highly regarded person in the community. In addition, his effectiveness is related to the time he has available to provide the service and information required by most farmers.

In terms of dealer location, the survey findings indicate that the average farmer is aware of dealers in a 5 to 6 mile radius of his farm. Furthermore, the results show that while most farmers tend to shop and purchase within this small area, there is no significant preference for the nearest dealer. Thus establishing dealers at 10 mile intervals would insure complete coverage of

the market. This would mean that in a county which is 30 miles by 30 miles, approximately nine well-placed dealers would insure complete coverage. Assuming that dealerships are established at 10 mile intervals, hence most farmers in the area would consider a dealer nearby, it is probably more important to concentrate attention on getting the right person in the dealership and properly servicing him, than on establishing new dealerships at closer intervals. Thus after the market area is adequately covered with good dealers, any strategy of simply adding more outlets, in all likelihood, will not be successful. Given that a dealer is reasonably close, farmers are more interested in other characteristics of the dealer than proximity.

In the distribution program, emphasis should also be placed on insuring that dealers and salesmen devote a considerable amount of time to contacting farmers. Results of this research have shown that efforts in this regard most likely will be successful. On the average, the sample farmers reported that they purchased some seed from one out of every two dealers or salesmen who visited them. Although most farmers reported that they preferred to do business with dealers, a sizeable proportion indicated that they would purchase from a salesman if they knew him personally and had confidence in him.

Finally, in regard to the distribution program, it is apparent from the results of this study that farmers are not generally aware of many seed dealers in their communities. Any efforts on the part of seed firms to increase the visibility of their dealers will increase this awareness, hence increase the likelihood that their dealers will be successful.

### Advertising and Promotion

In general, the farmers tended to minimize the importance of advertising as a determinant in their brand selection decision. As a means of transmitting meaningful product information to farmers, it is probably true that advertising is not a very useful tool. Other sources of information such as seed dealers, the CHCPTR, and neighbors and friends are considered to be more important. However, with the exception of seed dealers, these channels of information are not under the direct control of seed firms. Thus the information transmitting potential of seed dealers should be fully exploited. While most farmers tended to believe that the information provided by seed dealers is adequate, there is probably considerable room for improvement in this respect.

Although advertising apparently is of little value in transmitting meaningful product information, as a means of creating awareness it is a powerful tool. Given the low level of awareness of several brands, it is evident that steps need to be taken to increase this level. This, of course, is important for the obvious reason that a farmer will not purchase a brand he is not aware of. In addition, it is obvious that most farmers prefer to purchase brands which, in their estimation, are well known and popular.

Since the most useful type of advertising most likely is of the awareness building type, much of this should be designed to create a favorable image for the firm. Thus, this type of advertising will be most successful if it stresses those aspects of a seed firm which are most important to farmers. On the basis of the results of this research, these aspects are the research program of the firm, the type and extent of product information available, and the quality of the dealers representing the firm.

### Market Potential

The results of this research have shown that a sizeable proportion of farmers have indicated a willingness to switch brands of seed corn by actually doing so during the three years for which detailed purchasing records were obtained. This is an important finding for seed firms. It indicates that a large percentage of the farmers can be viewed as potential customers in the sense that they have little or no reluctance to switch to a new brand if they become dissatisfied with the brand they are presently using. On the other hand, such a result also means that seed firms cannot rely on the continued patronage of existing customers. If present customers become dissatisfied, they too are likely to switch to another brand. In both cases, the marketing implications to seed firms are clear. In order to maintain an existing share of the market, firms must strive for a superior product line, and develop aggressive marketing programs to sell it. To expand their market share they must do even more.

### IMPLICATIONS FOR FARMERS

Insights into the buying behavior of farmers can provide valuable information to aid farmers improve their buying process. Since even small improvements in their buying habits might be translated into important income gains, this matter is not of trivial importance.

In general, the results of this research have shown that farmers are not deliberate purchasers in the case of seed corn. Although they profess to be motivated by objective, performance oriented attributes of the products available, it is obvious that in several instances their purchasing decision

is based more upon habit, convenience, and personal relationships. This is particularly true in the case of the secondary brand. While these latter factors are important to some farmers for reasons of time savings and neighborhood relations, it should be recognized that purchases made using these criteria may not always be optimum from the point of view of reducing costs or increasing profits.

The general lack of deliberateness of farmers in purchasing seed corn is perhaps best exemplified by their general lack of shopping. Of the six searching activities defined in this project, only two--contacting seed dealers and consulting the OHCPT--were used by a majority of farmers; and even these activities were used by only slightly over half of the farmers. The remaining searching activities, despite the fact that they can provide useful product information at a relatively low cost, were not widely used at all. Since accurate information is basic to any intelligent purchasing decision, it is apparent that farmers could improve their buying ability significantly by searching in a more thorough manner.

It has also been established in this research that farmers tend to confine their shopping within a relatively small radius of their farms. In the event that a wide variety of products is available in this area, this tendency should not result in a purchasing decision based upon insufficient information. However, in areas where only a few alternatives are available, this could lead to poor purchasing decisions.

APPENDIX

QUESTIONNAIRE

## QUESTIONNAIRE

1. For the following products please tell me the number of different brands you have used in the past five years
- |          |          |             |          |
|----------|----------|-------------|----------|
| Tractors | _____ -1 | Herbicides  | _____ -4 |
| Feed     | _____ -2 | Fertilizers | _____ -5 |
| Seed     | _____ -3 | Petroleum   | _____ -6 |
2. On CARD 1 would you please indicate the brands of seed corn you purchased during the past three years. For each year indicate all brands purchased, and for each brand, the name of the dealer from whom you bought the seed. Also try to indicate the percentage each brand was of your total purchase.
3. I notice that last year most of the seed you purchased was . . . . . (Check brand on CARD 1). What were your reasons for choosing this brand?
4. I also notice that you bought some . . . . . (Check brand on CARD 1). What were your reasons for choosing this brand?
- (Check CARD 1 to see if the farmer switched major brands between 1971 and 1972. If he did, ask question 5, otherwise move onto question 6.)
5. I notice that in 1971 the major brand you purchased was . . . . . while in 1972 it was . . . . . Why did you decide to purchase more of . . . . . in 1972?
6. What is your biggest problem in buying seed corn?
7. Did you attend any company or University field days within the last year?
- Yes \_\_\_\_\_ -1                      No \_\_\_\_\_ -2
8. If yes, approximately how many different times?
- \_\_\_\_\_ number of times
9. Do you plant any test plots on your farm to compare different varieties and brands of seed corn?
- Yes \_\_\_\_\_ -1                      No \_\_\_\_\_ -2
10. If yes, how many different varieties and brands do you usually plant in the test plot?
- \_\_\_\_\_ number of varieties
- \_\_\_\_\_ number of brands

11. Do you make a point of checking the yields you get from each variety of seed corn you plant on your farm?  
 Yes \_\_\_\_\_-1                      No \_\_\_\_\_-2
12. What do you think is the maximum sustainable yield you can get on this farm?  
 \_\_\_\_\_ Grain (Bushels/acre)  
 \_\_\_\_\_ Silage (Tons/acre)
13. How many different seed dealers did you contact before making your last seed corn purchase?  
 \_\_\_\_\_ number of dealers
14. How many different seed dealers contacted you before you made your last seed corn purchase?  
 \_\_\_\_\_ number of dealers
15. Of the dealers that called on you, how many did you buy seed corn from?  
 \_\_\_\_\_ number purchased from
16. How many seed corn salesmen contacted you before you made your last seed corn purchased?  
 \_\_\_\_\_ number of salesmen
17. Of the salesmen that called on you, how many did you buy seed corn from?  
 \_\_\_\_\_ number purchased from
18. Did you ask the advice of any of your neighbors and friends when considering your last seed corn purchase?  
 Yes \_\_\_\_\_-1                      No \_\_\_\_\_-2
19. Did you read the "Ontario Hybrid Corn Performance Trials Report" last year?  
 Yes \_\_\_\_\_-1                      No \_\_\_\_\_-2
20. In what month do you seriously begin to think about ordering your seed corn for the next season?  
 \_\_\_\_\_ month



21. When do you actually place your seed corn order?

\_\_\_\_\_ month

22. How do you decide how many acres of corn to plant?

23. How do you decide which variety of seed corn to plant?

24. How many acres of corn did you plant this Spring for grain and for silage?

\_\_\_\_\_ acres for grain

\_\_\_\_\_ acres for silage

25. How much seed corn did you purchase for planting this Spring? (Be sure to record the units; i.e., bushels, 50 pound bags, etc.)

\_\_\_\_\_ number

\_\_\_\_\_ units

26. About how many kernals per acre did you plant this year?

Less than 12,000 \_\_\_\_\_ -1

12,000 to 15,999 \_\_\_\_\_ -2

16,000 to 19,999 \_\_\_\_\_ -3

20,000 to 23,999 \_\_\_\_\_ -4

over 24,000 \_\_\_\_\_ -5

27. How did you decide how much fertilizer to apply to your corn this year?

28. Have you had any of your fields soil tested in the last five yars?

Yes \_\_\_\_\_ -1

No \_\_\_\_\_ -2

29. Have you ever tried to figure out on paper what your cost of production is for corn?

Yes \_\_\_\_\_ -1

No \_\_\_\_\_ -2

30. What were your average yields for grain and silage in each of the past three years?

Grain (Bushels/acre) Silage (Tons/acre)

1971 \_\_\_\_\_

1970 \_\_\_\_\_

1969 \_\_\_\_\_

31. Which of the following farm magazines do you subscribe to

Farm and Country	_____	
Good Farming	_____	
Ontario Milk Producer	_____	
Feedlot Management	_____	
Farm Journal	_____	
The Farm Quarterly	_____	_____ number
Successful Farming	_____	
Country Guide	_____	
Cash Crop Farming	_____	
Western Ontario Farmer	_____	

32. CARD 2 contains a list of several sources from which farmers can get information about seed corn. On the right is a set of categories that vary from (1) "Not Important" to (5) "Extremely Important". For each information source circle that category which best describes its importance to you in selecting your brand of seed corn.
33. CARD 3 contains a list of several different brands of seed corn. Please indicate with a check those you have heard of, even if you have never used them.
34. CARD 4 lists several different brands of seed corn. For each of these brands list the name of a nearby dealer from which you could purchase that brand. Also give the dealers approximate distance in miles from your farm. If you don't know of any dealer handling a certain brand, please leave the space blank.
35. CARD 5 in the booklet contains several advertising slogans and variety names for brands of seed corn. For each slogan or variety name please indicate the name of the brand with which it is associated. If you do not know the proper brand name, please go on to the next one.
36. You have been purchasing Brand x seed corn for years. The price of brand x has been about average compared with the other major brands, but all of a sudden this year it is ten percent higher than the other brands. You are unable to detect any significant improvement in the quality or service of Brand x. What would you do?
- |   |       |    |
|---|-------|----|
| Continue to purchase the same amount of Brand x.                  | _____ | -1 |
| Continue to purchase some of Brand x along with some other brand. | _____ | -2 |
| Discontinue completely your purchase of Brand x.                  | _____ | -3 |

37. You have been purchasing Brand x seed corn for years from Mr. Jones, a corn dealer a few miles from your home. You and Jones, in addition to doing business with each other, are also good friends. Suddenly Jones decides to stop handling Brand x and start selling Brand y. You think that Brand y is as good as Brand x but you have never tried it. What would you do?

Continue to purchase Brand x  
from some other dealer. \_\_\_\_\_ -1

Purchase Brand y from Jones \_\_\_\_\_ -2

Purchase some Brand y from  
Jones and the rest from some  
other dealer handling Brand  
x. \_\_\_\_\_ -3

38. Assume the same situation as above except Jones doesn't quit handling Brand x, but merely moves to a new location 25 miles away. What would you do?

Continue to purchase Brand x  
from some other dealer \_\_\_\_\_ -1

Continue to purchase Brand x  
from Jones \_\_\_\_\_ -2

Purchase some Brand x from  
Jones and the rest from some  
other dealer \_\_\_\_\_ -3

39. Suppose that a new farmer moved into your community and was unfamiliar with any dealers or brands of seed corn. He needs to buy seed corn but does not know where to go. Which of the following courses of action do you think would be the wisest for him to take:

Seek a dealer handling the  
same brand that he planted  
before \_\_\_\_\_ -1

Inquire from his neighbors  
because they know the dealers  
in their area and can give  
good advice \_\_\_\_\_ -2

Visit with four or five different  
dealers in the vicinity and get  
acquainted with them \_\_\_\_\_ -3

40. There is apparently much disagreement among farmers concerning the relative importance of brands of seed corn and dealers. Some farmers believe that the most important thing is to choose a reliable brand and stick with it since there is a great deal of difference among brands of seed corn, but not much difference among dealers. Other farmers believe that most brands of seed corn are about alike and that the big problem is to shop around and find a good dealer since there is a great deal of difference among dealers.

Do you generally agree with the brand importance idea, or the dealer importance idea or do you think there is a more important consideration in choosing your seed corn supplier?

Brand \_\_\_\_\_ -1

Dealer \_\_\_\_\_ -2

Other \_\_\_\_\_ -3

If other, specify what consideration.

41. The next three cards contain product, dealer and company characteristics which may be of interest to farmers when they purchase seed corn. On the right is a set of categories that vary from (1) "Not Important" to (5) "Extremely Important". Circle that category that best represents what your attitudes toward each product, dealer, and company characteristic are. Please place one response on each line and leave no line blank.
42. The last sheet in your booklet contains pairs of factors which may be important to you when purchasing seed corn. For each pair of factors, select the one which is most important to you by checking it or placing a circle around it.
43. In general, do you like to talk about seed corn with your friends and neighbors?
- Yes \_\_\_\_\_ -1      No \_\_\_\_\_ -2
44. During the past six months, have you passed on any information about some variety of seed corn to other farmers?
- Yes \_\_\_\_\_ -1      No \_\_\_\_\_ -2
45. Would you say you give very little information, an average amount of information, or a great deal of information about various brands or varieties of seed corn to your friends and neighbors?
- You give very little information \_\_\_\_\_ -1
- You give an average amount of information \_\_\_\_\_ -2
- You give a great deal of information \_\_\_\_\_ -3

46. Compared with your circle of friends and neighbors are you less likely, about as likely, or more likely to be asked for advice about the purchase of seed corn?

Less likely to be asked \_\_\_\_\_ -1

About as likely to be asked \_\_\_\_\_ -2

More likely to be asked \_\_\_\_\_ -3

47. Which of these things happens more often? Do you tell your friends about seed corn, or do they tell you about seed corn?

You tell them about seed corn \_\_\_\_\_ -1

They tell you about seed corn \_\_\_\_\_ -2

48. If you and your friends were asked to discuss seed corn what part would you be most likely to play? Would you mainly listen to your friends' ideas or would you try to convince them of your ideas?

You mainly listen to your friends' ideas \_\_\_\_\_ -1

You try to convince them of your ideas \_\_\_\_\_ -2

49. Do you have the feeling that you are generally regarded by your friends and neighbors as a good source of advice about seed corn?

Yes \_\_\_\_\_ -1      No \_\_\_\_\_ -2

50. When some new seed corn variety is developed and released are you

Generally the first to try it in your neighborhood \_\_\_\_\_ -1

Among the first to try it \_\_\_\_\_ -2

Try it as soon as most of your neighbors \_\_\_\_\_ -3

Wait to see how it works on your neighbors' farms \_\_\_\_\_ -4

51. What kind of a yield do you think most of your neighbors are getting from their corn?

\_\_\_\_\_ Grain (Bushels/acre)

\_\_\_\_\_ Silage (Tons/acre)

Now I would like to ask you a few questions about yourself and your farming operation.

52. How many years have you been actively engaged in farming?

\_\_\_\_\_ years

53. Into which of the following age groups do you fall?

Under 25	_____ -1	45-54	_____ -4
25-34	_____ -2	55-64	_____ -5
35-44	_____ -3	65 & over	_____ -6

54. How many tillable acres do you farm?

\_\_\_\_\_ tillable acres

55. Into which of the following tenure groups do you fall?

Owner	_____ -1	Partowner, part tenant	_____ -3
Tenant	_____ -2	Manager	_____ -4

56. Are you a member of any farm supply cooperative?

Yes \_\_\_\_\_ -1      No \_\_\_\_\_ -2

57. Into which of the following categories would you fall with respect to the gross income from your farm last year?

Over \$75,000	_____ -1	\$15,000 to \$24,999	_____ -5
\$50,000 to \$74,999	_____ -2	\$10,000 to \$14,999	_____ -6
\$35,000 to \$49,999	_____ -3	\$5,000 to \$9,999	_____ -7
\$25,000 to \$34,999	_____ -4	Under \$5,000	_____ -8

58. Please rank the enterprises in terms of their importance on your farm.

Cash Grain	_____ -1	Beef Cattle	_____ -4
Dairy	_____ -2	Poultry	_____ -5
Hogs	_____ -3	Other	_____ -6

59. How much non-farm work do you do in a year?

None	_____ -1	100 days or less	_____ -3
7 days or less	_____ -2	over 100 days	_____ -4

60. How much custom work do you do in a year?

\_\_\_\_\_ number of days  
 \_\_\_\_\_ type of custom work  
 \_\_\_\_\_ (e.g., corn picking, hay baling, etc.)

61. How many years of formal education have you completed?

1-8 years \_\_\_\_\_ -1

9-13 years \_\_\_\_\_ -2

Over 13 years \_\_\_\_\_ -3

If over 13 years, specify training \_\_\_\_\_

62. Do you anticipate in the next five years that your farm will increase in size, remain about the same size, or decrease in size?

Increase in size \_\_\_\_\_ -1 -1

Remain about the same size \_\_\_\_\_ -2

Decrease in size \_\_\_\_\_ -3

63. Are you currently a dealer for any brand of seed corn?

Yes \_\_\_\_\_ -1      No \_\_\_\_\_ -2

If yes, specify the brand

\_\_\_\_\_ brand

64. Have you ever been a dealer for any brand of seed corn?

Yes \_\_\_\_\_ -1      No \_\_\_\_\_ -2

If yes, specify the brands

\_\_\_\_\_ brand

\_\_\_\_\_ brand

\_\_\_\_\_ brand

## CARD 1

1972	Brand	_____	_____	_____	_____	_____	_____
	Dealer	_____	_____	_____	_____	_____	_____
	Percent	_____	_____	_____	_____	_____	_____
1971	Brand	_____	_____	_____	_____	_____	_____
	Dealer	_____	_____	_____	_____	_____	_____
	Percent	_____	_____	_____	_____	_____	_____
1970	Brand	_____	_____	_____	_____	_____	_____
	Dealer	_____	_____	_____	_____	_____	_____
	Percent	_____	_____	_____	_____	_____	_____

## CARD 2

	1	2	3	4	5
	Not Important				
	Somewhat Unimportant				
	Neither Important Nor Unimportant				
	Somewhat Important				
	Extremely Important				
Farm Magazine Advertisements	1	2	3	4	5
Local Newspaper Advertisements	1	2	3	4	5
Seed Dealers	1	2	3	4	5
Seed Salesmen	1	2	3	4	5
Literature from Seed Companies	1	2	3	4	5
OHCPTR	1	2	3	4	5
Neighbors and Friends	1	2	3	4	5
Agricultural Representatives	1	2	3	4	5
T.V. and Radio Advertisements	1	2	3	4	5
University Personnel	1	2	3	4	5
Custom Operators	1	2	3	4	5



## CARD 3

Acco	_____	Pioneer	_____
Asgrow-United	_____	Pride	_____
Belle River	_____	Renks	_____
Coop	_____	Seneca	_____
Dekalb	_____	Stewarts	_____
Funk's	_____	Todd	_____
Garno	_____	Tomco	_____
Jacques	_____	Trojan	_____
Michigan	_____	United	_____
N.K.	_____	Warwick	_____
P.A.G.	_____		

## CARD 4

	Dealer	Distance		Dealer	Distance
Acco	_____	_____	Pioneer	_____	_____
Asgrow-United	_____	_____	Pride	_____	_____
Belle River	_____	_____	Renks	_____	_____
Coop	_____	_____	Seneca	_____	_____
Dekalb	_____	_____	Stewarts	_____	_____
Funk's	_____	_____	Todd	_____	_____
Garno	_____	_____	Tomco	_____	_____
Jacques	_____	_____	Trojan	_____	_____
Michigan	_____	_____	United	_____	_____
N.K.	_____	_____	Warwick	_____	_____
P.A.G.	_____	_____			

## CARD 5

- |                              |                             |
|------------------------------|-----------------------------|
| 1. "More Farmers Plant ..... | 8. 3909                     |
| 2. SX44                      | 9. "Grow with ....."        |
| 3. PX20                      | 10. S265                    |
| 4. "Seedsman to the World"   | 11. SL416                   |
| 5. R381                      | 12. "Total Crop Programs"   |
| 6. "Go With the Leaders:     | 13. "Plant All You Can Get" |
| 7. G4444                     | 14. XL45A                   |
|                              | 15. 2606                    |

## CARD 6

	Not Important	Somewhat Unimportant	Neither Important nor Unimportant	Somewhat Important	Extremely Important
Standability	1	2	3	4	5
Ear Retention	1	2	3	4	5
Grain Quality	1	2	3	4	5
Dry Down Rate	1	2	3	4	5
Test Weight	1	2	3	4	5
Yield	1	2	3	4	5
Tolerance to Insects	1	2	3	4	5
Seedling Vigor	1	2	3	4	5
Seed Sizing	1	2	3	4	5
Package or Container	1	2	3	4	5
Appearance in the Field	1	2	3	4	5
Tolerance to Stress	1	2	3	4	5
Low Price	1	2	3	4	5
Well Known	1	2	3	4	5
Ease of Husking	1	2	3	4	5
Uniformity in Maturing	1	2	3	4	5

CARD 7

	1	2	3	4	5
Provides Good Service	1	2	3	4	5
Easy to Deal With	1	2	3	4	5
Carries Full Line of Farm Seeds	1	2	3	4	5
Has Adequate Product Information	1	2	3	4	5
Has Custom Planting Service	1	2	3	4	5
Nearby	1	2	3	4	5
Reliable	1	2	3	4	5
Outstanding Farmer	1	2	3	4	5
Aggressive Seller	1	2	3	4	5
Honest	1	2	3	4	5
Good Friend	1	2	3	4	5
Community Leader	1	2	3	4	5
Relative	1	2	3	4	5
Takes Time to Discuss Problems	1	2	3	4	5

Not Important  
 Somewhat Unimportant  
 Neither Important nor Unimportant  
 Somewhat Important  
 Extremely Important

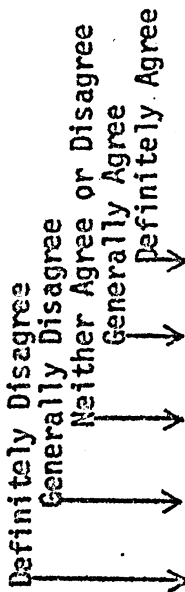
## CARD 8

	Not Important	Somewhat Important	Neither Important Nor Unimportant	Somewhat Important	Extremely Important
	1	2	3	4	5
Large Company	1	2	3	4	5
Good Dealers	1	2	3	4	5
Modern Facilities	1	2	3	4	5
Trustworthy	1	2	3	4	5
Canadian Owned	1	2	3	4	5
Good Research Program	1	2	3	4	5
Good Salesmen	1	2	3	4	5
Honest	1	2	3	4	5
Produces Full Line of Farm Seeds	1	2	3	4	5
Well Known	1	2	3	4	5
Has Liberal Credit Policies	1	2	3	4	5
Has Wide Range of Varieties	1	2	3	4	5
Provides Adequate Product Information	1	2	3	4	5

## CARD 9

Price	Dealer is Nearby
Dealer is Nearby	Company is Well Known
Service is Good	Price
Price	Corn Performance
Dealer is Personal Friend	Company is Well Known
Service is Good	Dealer is Personal Friend
Corn Performance	Service is Good
Dealer is Personal Friend	Dealer is Nearby
Company Well Known	Price
Price	Dealer is Personal Friend
Corn Performance	Dealer is Nearby
Company Well Known	Service is Good
Dealer is Personal Friend	Corn Performance
Corn Performance	Company Well Known
Dealer is Nearby	Service is Good

Please read the following statements carefully. After each statement there are five numbers from 1 to 5. The higher the number, the more you tend to agree with the statement, the lower the number you tend to disagree with the statement. For each statement, circle the number that best describes your feelings about that statement.



1. I make it a point to read advertisements for seed corn.      1    2    3    4    5

2. The information provided by seed companies concerning product characteristics and uses is generally satisfactory.      1    2    3    4    5

3. There are major differences between brands of seed corn.      1    2    3    4    5

4. I try different brands of seed corn more often than my neighbors.      1    2    3    4    5

5. I will consider buying seed corn from any salesman who convinces me that he has a good product and can show me how it fits into my operation.      1    2    3    4    5

6. A farmer can save a lot of money by looking around for the best deals.      1    2    3    4    5

7. I like to plant several different varieties of seed corn to reduce the risk of getting a poor one.      1    2    3    4    5

8. The "Ontario Hybrid Corn Performance Trials Report" is the only reliable source of information about brands of seed corn.      1    2    3    4    5

9. It is fairly easy to judge the performance of different brands of seed corn.      1    2    3    4    5

10. I keep away from unfamiliar brands.      1    2    3    4    5

11. Before deciding upon my purchase of seed corn I frequently check ads in farm magazines.      1    2    3    4    5

12. I am the kind of person who makes up his mind on what brand to buy and then sticks with that brand for a number of years.      1    2    3    4    5

13. The price of seed corn is unreasonably high.      1    2    3    4    5

14. My neighbours and friends usually give me good advice on what brand of farm supplies to buy.

1 2 3 4 5

15. I like to buy my seed corn from a company that is well known.

1 2 3 4 5

16. I am always happy to discuss my seed corn program with dealers and salesmen.

1 2 3 4 5

17. Information I get about seed corn from company advertising is more reliable than what I get from a dealer.

1 2 3 4 5

18. I seldom or never buy seed corn from a company salesman because I prefer to buy from a farmer dealer.

1 2 3 4 5

19. I like to change brands of seed corn frequently.

1 2 3 4 5

20. I usually look for the lowest possible price when buying seed corn.

1 2 3 4 5

21. I enjoy shopping around for farm supplies.

1 2 3 4 5

22. My choice of brands for many farm supplies is influenced by the advertising I see or hear about these products.

1 2 3 4 5

23. I feel that much of the buying of farm supplies that I do is based on habit.

1 2 3 4 5

24. For most farm supplies I tend to use the brands which are most popular.

1 2 3 4 5

25. I enjoy visiting with dealers and salesmen.

1 2 3 4 5

26. I will consider buying seed corn from a salesman only if I know him personally and have confidence in him.

1 2 3 4 5

27. All brands of seed corn are approximately the same. The major difference is in terms of the type and extent of dealer services associated with each brand.

1 2 3 4 5

28. A lot of the advertising done by seed companies is misleading.

1 2 3 4 5

29. Whenever possible I like to buy most of my farm supplies from the same dealer.

1 2 3 4 5

30. I prefer to buy my seed corn from farmer dealers rather than store dealers.

1 2 3 4 5



