THE UNIVERSITY OF MANITOBA

MARKET INFORMATION: NEEDS AND SOURCES FOR THE MANITOBA GRAIN FARMER

by

© Michelle L. Timko

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ABSTRACT

Market Information: Availability and Applicability to the Manitoba Grain Farmer

by

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Determining the suitability of market information and where it can be found is a problem for farm management decision makers. As suggested by this thesis, incorporating marketing as part of the farm management decision process allows us to consider two forms of market information which are applicable to decision making; macroeconomic and microeconomic. Macroeconomic information is the aggregated information available of the macroenvironmental forces that constrain and influence a farmer's decision making. Microeconomic information includes the specific information applicable to the individual firm.

The general objectives of this thesis are to examine the importance, availability and need for more information of both types. A literature review supports the need for more studies within the area of marketing information and the need for more microeconomic information. A conceptual model is designed which illustrates how these types of information fit into the decision making process. A review of grain market information sources in Canada was developed. Finally, a survey

was conducted among four distinct groups of Manitoba grain farmers to determine their perceived needs from market information. The analysis of data collected through the survey determined that both types of information are considered important by the farmer. However, those who belong to the Canola Growers favoured microeconomic in degree of importance. Both types of information were considered available by all participants. Finally, over the entire group, there was no significant difference in the need for more microeconomic or macroeconomic information. However, across groups, those within the Canola Growers cited a need for more microeconomic information while those within the Wheat Growers cited a need for more macroeconomic information.

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I am grateful to the Northern Sales Company Ltd. - C.O. Swartz Trust Fund which helped finance the Futures Market Inventory Project and to the Statistical Advisory Service, University of Manitoba who assisted with the statistical analysis of the survey. In addition, I would thank the Manitoba Canola Growers Association and The Western Canadian Wheat Growers for supplying the names for the survey samples.

Finally, I would like to thank my family and friends who provided encouragement and support during the completion of this thesis.

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INTRODUCTION

1.1 PROBLEM STATEMENT

Determining what information is needed and where it can be found is a continual problem for decision makers. A study by Chamberlain (1984) found that the most important kinds of information, as rated by farmers, were respectively, production, farm business management and marketing.

Traditionally, agricultural marketing has been viewed as an event occurring after production and as a macroeconomic phenomenon. Many farmers appear to believe that their marketing decisions have been made once their grain is delivered to the elevator and that the selling of grain is equivalent to marketing. Thereby, the importance of the role of marketing information may be underestimated. In business, marketing has always been viewed as part of a systematic decision making process directed to fulfil a firm's goals. Most business texts introduce marketing this way within the first few chapters along with information's role in decision making. Information search and use in most business activity is considered part of the individual's decision making process, a microeconomic concept. Schoner and Uhl (1975) list only four simple steps in decision making; intelligence, design, choice and implementation. A more complex version by Tull and Hawkins (1976)

illustrate additional steps though the headings are still summarized into three basic areas; problem identification, selection and solution (Diagram 1).

Information is the one input into decision making required throughout the process. The decision made is dependent upon accumulated information about the selected problem. Information improves the efficiency of the firm by reducing the risk and uncertainty associated with decision making. Generally, for a competitive firm facing production uncertainty, a decrease in uncertainty will increase production and input use.

Recently, agricultural marketing has been introduced as part of farm management decision making rather than as a separate discipline (Purcell 1979, Sporleder 1983, Loyns 1985), implying that marketing has microeconomic characteristics in some situations in addition to the more traditional macroeconomic perspective typical of the literature and practice of agricultural economics.

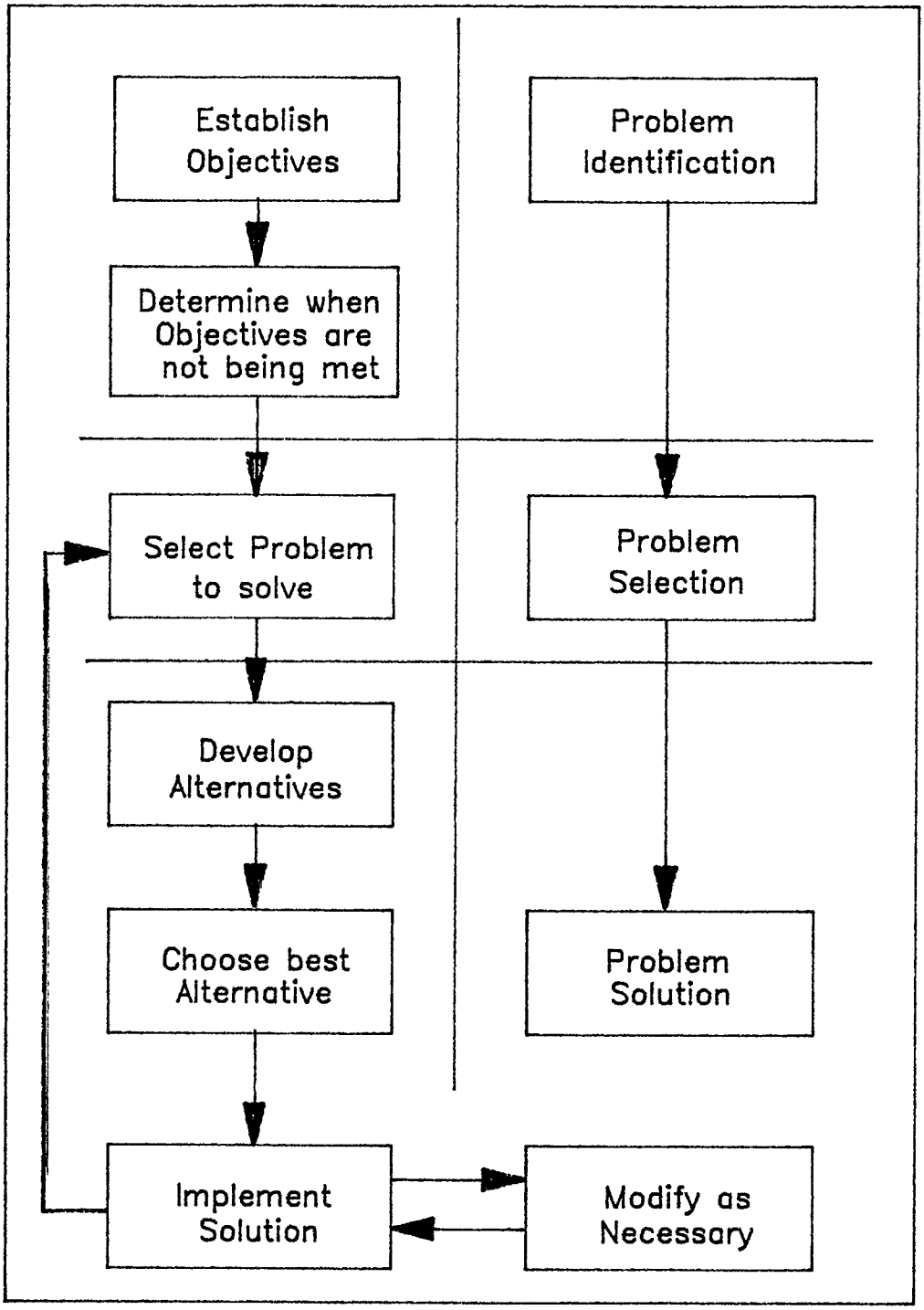
In the past, the determinants of supply and demand are the fundamental bases on which marketing information has been viewed. Actual information requirements for individual decision making have not been studied from the marketing standpoint. Hall (1977) points out that inappropriate, or lack of, market information has a more serious effect on the efficiencies of an individual producer than on the industry.

The suitability of marketing information influences the effectiveness of decisions made based on that information. This effectiveness depends "not only on information being factually correct," but on "whether it is in a form that potential users can understand, is correctly interpreted and users have the ability to profitably employ this information"

DIAGRAM 1

TULL/HAWKINS

DECISION MAKING MODEL



(Griffith 1976:p. 6). As the marketing process becomes more sophisticated and the producer becomes more distant from the final market, the need for appropriate information is essential for effective and efficient decision making. The differences in understanding of the role of marketing by the agricultural economic profession, has left a void regarding relevant studies related to marketing information from a microeconomic viewpoint. However, recently, the role of information in firm decision making has become increasingly prominent in microeconomics (Sporleder 1983). This void provides the need and opportunity to approach marketing information studies from innovative directions. Recognizing the new dimensions of marketing (micro-marketing) allows one to view marketing information requirements of individual firms.

People within the agricultural industry, either agri-business or primary production, have already indicated a need for more microeconomic marketing information. Turner (1983) comments that analysis of marketing systems is "conducted on a macro basis with too little analysis of the effect of individual sectors (p. 28)." A symposium in the U.S.A. (1985) on "The Quality and Needs for Agricultural Information and Statistical Data" concluded, in part, that there would be increased demand for basic and microlevel data.

Past literature based on primary data regarding marketing information needs and sources for individual producers is nearly non-existent. For this reason alone an academic inquiry into a new disciplinary approach to marketing may be justified. Both Freebairn (1978) and Walker (1985) emphasize that an assessment of client needs should be considered when

planning for outlook.[1] "Weakness in current programs are most evident in our ability to relate to and provide for those needs" (Walker 1985:p. 75).

Also, a basis is needed from which to evaluate effectively existing market information systems and data. First, according to Lee and Nicholson (1973) it is necessary to "investigate and determine the lack or conflict that exists because of information not being available, and secondly, determine alternative ways in which information can be made available (p. 922)."

Finally, a basis is needed from which suppliers of information can choose and market that which is relevant to the producer. Referring to agriculture, Eisgruber (1978) observes that several developments have contributed to the increased interest in the area of economics of information, one being that our profession may have relied too much on deductive analysis without proper concern for the relevance of the data base resulting in an increasing amount of work completed with increasingly irrelevant data.

This thesis hopes to address the concerns expressed regarding a lack of and the irrelevancy of studies regarding market information. A conceptual framework will be developed to provide a basis for the analysis of grain market information in Canada. In addition, primary data will be collected to empirically support the framework generated.

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[1]Outlook is a word used to describe information and data related to the forecasting of commodity markets. In terms of the definitions used in this thesis, Oulook is likely to be only aggregate in nature (i.e. Macroeconomic information).

1.2 OBJECTIVES OF THE STUDY

From a marketing standpoint, it appears important to establish the needs and sources of marketing information for Manitoba grain farmers. This study will attempt to determine whether there is a need for more appropriate market information for firm decision making. Assuming that market information can be defined as either macroeconomic or microeconomic, in order to achieve this general purpose, three specific objectives are:

a) to determine whether there is a priority for either type of information, microeconomic or macroeconomic, for farmers. It is hypothesized that farm management decision making requires both microeconomic and macroeconomic orientated information on the markets in which farmers operate.

b) to determine whether micro or macroeconomic information is more readily available at present. It is hypothesized that macroeconomic information is more readily available.

c) to determine whether the market information now generated is meeting farmer's needs by establishing a need for additional micro or macroeconomic information at the producer level. It is hypothesized that there is a need for more microeconomic information.

1.3 OUTLINE OF THE STUDY

Chapter One has introduced the problem statement and outlined the hypotheses of the study. Chapter Two will define some of the more important terms required for the understanding of the material to follow.

Chapter Three provides a review of some of the relevant literature from 1940 to the present day. The role of information in the decision making process is examined in Chapter Four along with the market information needs and sources in the Canadian context for grain markets. The theoretical concepts supporting the study include information economics and decision making theory in Chapter Five. Chapter Six outlines the analytical approach for the problem, conducted as a survey to grain producers within the province of Manitoba, while Chapter Seven statistically analyzes the results of the survey. Chapter 8 presents the results of a survey of information available on futures markets in Canada as one example of market information availability. The conclusions drawn and the recommendations for further study are summarized in Chapter Nine.

Chapter II

DEFINITIONS

2.1 MACROECONOMICS VS MICROECONOMICS IN AGRICULTURAL MARKETING

This thesis is premised on the distinction between basic types of information required by decision makers. The terms used to make this distinction are macroeconomic and microeconomic.

Theoretically in economics, macroeconomic is defined as dealing with relationships among and between aggregates: the supply of the total output by the entire economy and the derived demand. Macroeconomic's objective is for an effective and efficient system. Microeconomics views the supply of individual commodities by separate firms and the demand of each individual buyer. It deals with decision making of the firm which attempts to accomplish a set of objectives.

The two are not completely distinct. However, "we find that we must approach macroeconomic problems with macroeconomic tools and microeconomic problems with microeconomic tools" (Ackley/Gardner 1963). Therefore, a problem regarding information in decision making as a microeconomic concept, must be solved from this viewpoint. As described in the literature review, until recently, this has not been done. As a result, the information required for micro-marketing analysis has not been well developed for farm management decision making.

Consequently, for the purposes of this thesis, it is necessary to

define macroeconomic and microeconomics in relation to market information required in the Canadian grain industry. Macroeconomic information is the aggregated information available of the macroenvironmental forces -- political, economical, climatic and legal -- that constrain and influence a farmer's decision making (Stanton/Sommers/Barnes 1985). Macroeconomic analysis deals with the absolute price. For example, it would include the aggregate supply and demand of each grain on the world or country basis, along with volume traded between countries. For agricultural marketing, Loyns (1985) refers to this generation of price by supply and demand and the factors considered in administering prices as price formation.

Since macroeconomics determines the price, without macroeconomic information "communication between often widely scattered buyers and seller would be distorted, consumer's preferences would not be accurately relayed back to producers, resource allocation would be sub-optimal and the whole market would suffer severe inefficiencies and inequities (Griffith 1976:p. 2)." Though a lack of market information may lead to inefficiencies in the marketing process from an industry prospective, the effect on the individual producer can be more serious (Hall 1977). Therefore, microeconomic information which includes the specific information applicable to an individual firm's decision making must also be present within the system. The exact estimates of this information will vary from producer to producer, but basic similarities are required by all. For example, each producer is concerned with his production level, his marketing options, the terms and conditions of sale for his product and the array of price alternatives he has for any one marketing

decision. As a result, individual decision making requires knowing the relative prices or returns between alternatives. Loyns (1985) labels this concept as price arrangements, a translation of "the outcome of overall price levels through the different market mechanisms into specific prices and specific terms and conditions of sale for the primary producer (p. 9)."

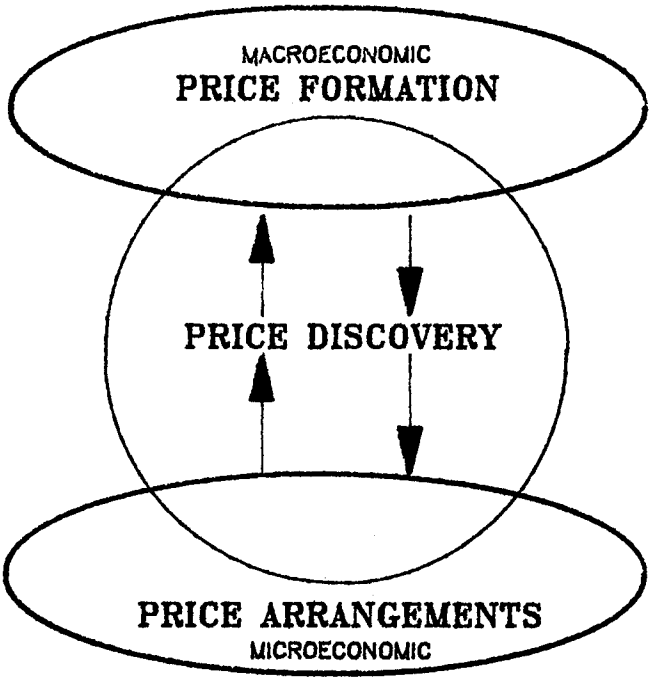
Again, microeconomic and macroeconomic are not always precisely defined. The grey area is where price discovery occurs (Loyns 1985). This involves the ability for the individual to realize which macroeconomic and which microeconomic information is appropriate for her/his use. The skills of the individual to manage and process the information available for decision making will help in discovering the appropriate price. The concepts of price formation, discovery, and arrangements are illustrated in Diagram 2. Price discovery is placed between formation and arrangements as it partly encompasses both price levels, microeconomic and macroeconomic. The two arrows illustrate the interaction between the two levels of price.

The differences between microeconomic and macroeconomic information in grain marketing can be demonstrated with a more specific example. As a producer, one must decide the profitability of a possible crop. Being able to compare selling alternatives early in the year could help an individual decide which option may be beneficial -- to sell the crop at harvest on-board or off-board, to store the crop and sell later, or to roll over a contract into the future. Of course, the benefits will vary with each operation because of distance to the elevator, handling charges and basis of each elevator, grain quality, terms of sale, and delivery

quotas. This is microeconomic. The information provided will determine which option is the best arrangement. The individual must choose between the selection of price arrangements given the information available. On the other hand, macroeconomically, the producer wishes to know the world or futures price of his product which is formed based on aggregate supply and demand. The factors which determine this base price are those on the aggregate level over which the individual has little control.

DIAGRAM 2

THE MICRO/MACRO RELATIONSHIP OF PRICE



2.2 MARKETING INFORMATION

Marshack (1968), Chavas/Pope (1973), Gould (1974) and Preckel et al. (1987) view information as a state of knowledge which alters the probabilistic distribution of an event, influencing the decision maker's preference in economic decisions. Information is a risk reducing input.

In mathematical terms, information is used to revise the prior probability distribution to a posterior distribution (Hirshleifer and Riley 1979). "The acquisition of information need not change the properties of the distribution in the long run frequency sense, but it can change the individual's well being with respect to the decisions he makes, given the distribution of outcomes (Gould 1974:p. 66)."

Stewart (1970) defines marketing information as "the sum total of knowledge about prices, supply, demand, stocks, government policy and background factors affecting the market on which an operator in this market bases his outcomes (p. 8)." This definition appears to only include that information which is macroeconomic. However, later, Hall (1977) considers the concept of microeconomics by describing market information as an aid to the decision maker. It includes information about supply, demand, price, policy and other matters which could affect farmers with their production and marketing decisions (Hunt 1974). The model in Section 4.2.1 describes in pictorial form and Section 5.2 gives specific examples of what is included in market information for this study. It includes a wide selection of past, present and future knowledge on a macro and microeconomic level. Macroeconomic information which affects the environment in which a producer must make a decision and the microeconomic information which relate to each individual producer are considered.

2.3 INFORMATION VS DATA

Though both information and data provide knowledge, they differ in their orientation. Data are the raw material or facts from which inferences are made: data are direct observations of an event. Information is processed material or that which has been inferred and affects the degree of uncertainty in the decision making process. As mentioned in the previous section, it should be considered a variable which affects the error term in order to decrease risk.

Information and data should be objective. However, data after analysis may partially contain subjective valuation. Beliefs, rumours, estimates and predictions are also considered information, each with different levels of credibility and objectivity. It is important to realize that not all information or data is of equal usefulness or quality. Information must be relevant and accurate. This proposition (characteristic) supports the hypothesis of this thesis. The literature review reinforces that market information is often irrelevant to the producer. This thesis, by developing a framework for the needs of grain market information in Canada hopes to determine which type of information is a priority, or seemingly more relevant, to producers.

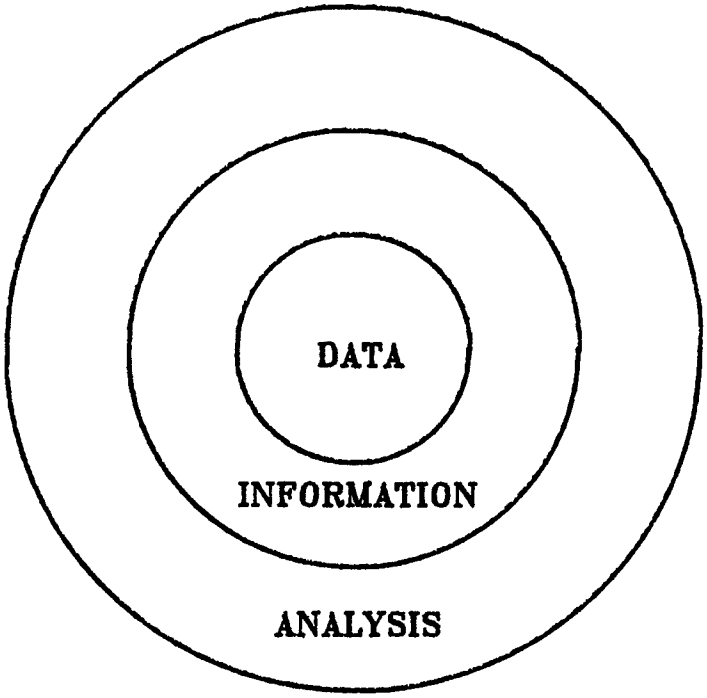
Data, as a set of facts, is a necessary part of information in relation to grain market information. However, it may be unusable by an individual if she/he can not extract appropriate information from it. Through the process of analysis, data can become information, which itself can be analyzed (diagram 3). Too much data may distract from their informational content. The possibility exists that, to the farmer,

present marketing information provided is synonymous with data because of a lack of analytic capabilities. This is not due to ignorance, or even necessarily to a lack of training, but is dependent on the unavailability of basic data, the degree of irrelevant and incorrect data, the complexity of data to analyze, and the limitations of cost and time to perform analysis. It is hypothesized that present information which is often deemed as inappropriate, is provided at a macroeconomic level, not the micro level necessary for firm decision making.

Data and information more applicable to the decision making process by the firm should improve the firm's ability to analyze her/his alternatives, and ultimately, improve choice.

DIAGRAM 3

THE RELATIONSHIP BETWEEN INFORMATION AND DATA

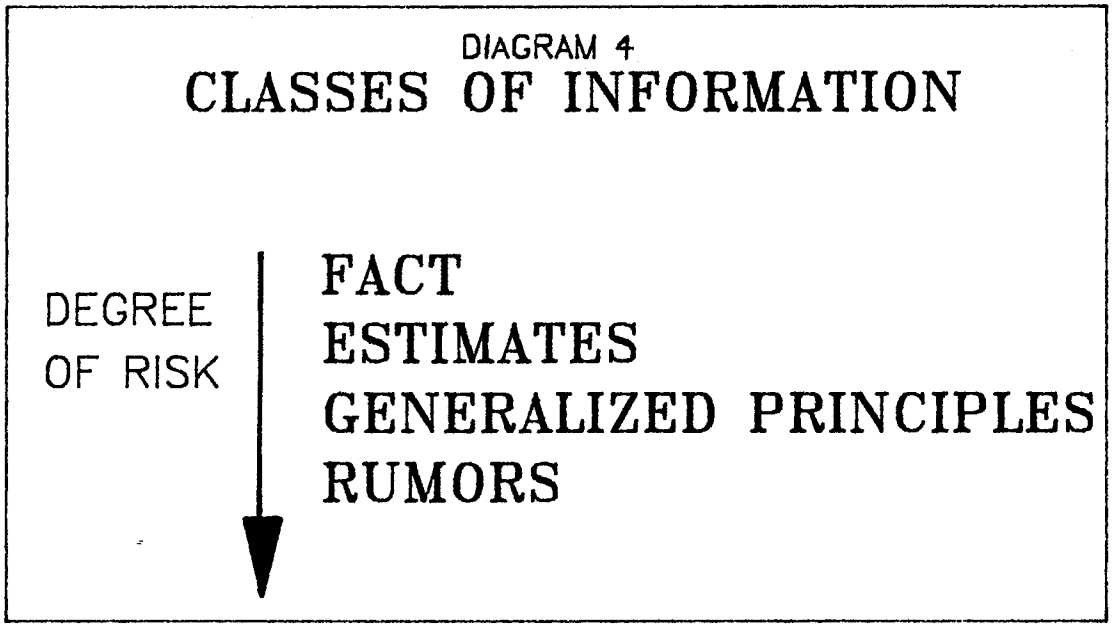


2.4 CLASSES OF INFORMATION

There are four classes of information; fact, estimates, generalized principles and rumours (Buzzel et al. 1969) which can be ranked ordinally according to the relative risk of error (Diagram 4). Data, or information which has not been analyzed, are facts. However, errors may exist in reporting and recording.

Estimates are past or present information based on inference or statistical procedure. Futuristic estimates are known as predictions or forecasts (for example, Outlook in agriculture).

Generalized principles are logically derived statements or theories accepted as true or usually true under the conditions and assumptions of their derivation.



Subjective information, that not necessarily based on inference from data or statistical procedures, but on one's personal opinion, are called rumours.

All these types of information can play a role in the decision making process. For effective decision making, it is necessary to determine, not only the type of information required, but rather the appropriate form in which the information is available and functional; macroeconomic versus microeconomic.

Chapter 111

REVIEW OF RELATED LITERATURE

Literature in the area of information and agricultural marketing is limited. This review chronologically traces the developments of market information studies in agriculture. Initially, the emphasis was macroeconomic information. However, as marketing began to be viewed as part of the farm management decision making process information was seen to be increasingly irrelevant. From this concern evolved the concept of microeconomic information.

3.1 PRE 1960

The economic situations of the 1930's demanded a macroeconomic approach to marketing. Thus, the surge of agricultural marketing studies in the 1940's dealt with aggregate solutions. This approach remained to dominate the literature until recently. No studies exist in agriculture which incorporate market information on either a macroeconomic or microeconomic level.

3.2 1960's AND 1970's

The role of marketing began to change with the introduction of information economics. However, few economists pursued the implications of imperfect information.

Stigler (1961) acknowledged information as a resource with value creating the concept that profit maximization is achieved through optimal information search. Information within agriculture was limited to price and market reporting, much of which was "highly aggregated and related to markets that were not realistic alternatives for farmers in particular areas (Clodius and Mueller 1961:p. 529)". Clodius and Mueller (1961) indicated that one problem of industrial organization that needs further study is the relationship between market information and individual performance and how changes in available market information can alter individual performance.

As an example, changes in market information regarding the 1988 rapeseed production could affect an individual's marketing decisions. Assume an individual has 5000 bu. of rapeseed. Prices are wild because of drought possibilities affecting local and world production. Producer car policy is unclear and there are chances that there will be a WGSA payout. The producer is faced with three options. Should he hold the grain, sell now, or roll a contract into the future. Information needed on which to base his decision include, clarification of producer car policy, dependable production and price forecast, and the probability of the WSGA payout. Clarification of producer car policy and elevator policies (90 day sales) could affect the space and time element of his decision, ie., where to sell and which of the three options to consider. In regards to form, the producer must determine the grade standards, his options under the Canadian Grain Act, the cost of cleaning, grain loss in cleaning and value of dockage.

Clodius and Mueller (1961) continue to argue that "one determinant

of product or service differentiation of firms is the relative degree of market information available to buyers and sellers (p. 531)." That is, whether buyers or sellers have a relative advantage. It appears that buyers tend to have accurate information where as sellers have "markedly poor information". Little change occurred over the past twenty five years. However, Phillips (1968) did recognize market information as the centrepin of the marketing system. Grossman and Stiglitz (1976) suggest prices will never reflect all information: imperfect information and uncertainty are always present.

However, by the late seventies the profession was becoming aware of the limited research on the theory of information in Agricultural Economics. Eisgruber (1978) accused economists of not developing concrete concepts and theories useful for such analysis.

The few agricultural information studies completed tended to focus on production and the value gained from additional information (Feder 1979, Funk/Tarte 1978), or in consumer economics where more information benefit the buyer of a product by improving foresight (Devine 1976). Information became an input with a cost in decision making. Marketing studies from a producer's viewpoint, on the other hand, continued to be concerned with aggregate consumption and absolute pricing. Information dissemination did not really change.

One exception to this generalization was Griffith (1976) who did assess two aspects of market information in the New South Wales Beef Industry, reporting and forecasting, concluding that improvements were necessary. He describes two pricing functions that can be used: one to help determine the general level of price and one to help set specific

carcass values. This recognizes the two forms of information present in farm management decision making, macroeconomic and microeconomic.

A year later Hall (1977) researched the cattle farmer's use of market information in the West District of Victoria, Australia. His conclusions stressed that the limited use of market information was due to presently available information which did not "appear to assist the majority of farmer's with their management or investment decisions although most thought market information should assist them with these decisions (Hall 1977:p. 66)."

Studies completed illustrated that market information did assist consumers. In April 1975 Devine conducted a study for the Food Price Review Board of Canada in which comparative prices from retail stores of a selected 65 item food basket were published in Ottawa-Hull and Winnipeg. In Ottawa-Hull, publishing the information caused prices to decline significantly. In Winnipeg, prices varied only slightly. Therefore, consumers benefited from publication of the information whether they actually used it or not. The Board concluded that "publication of comparative price information in a limited market area can, in the short term, have a positive impact on the degree of price competition in that market (Food Price Review Board 1975:p. iii)."

The findings of this experiment were incorporated into a paper by Devine and Marion (1979). More important than the immediate changes in market performance are the possible structural changes in the long run. To perform efficiently, a market's price information must be adequate and shared among the users, the same conclusion derived by Griffith (1976) in reference to producers. Devine (1976) wrote his Phd. thesis on 'The

Effect of Publishing Comparative Price Information for the Consumer in the Retail Market.' In a paper (1978), which was based on his thesis, Devine notes that though it is impossible for a consumer to compare all prices, a "defined 'minimum' level of market information is necessary for workable competition (Devine, 1978:p. 28)." Comparative retail price information is a public good which can provide benefits to society.

Though these studies conceptualized the need for comparative price information, the relevance of it to the producer (seller) as well as the consumer, and, the significance of it as microeconomic rather than macroeconomic data appears to have been unrecognized until recently.

3.3 The 1980's

The insufficient analysis of the effects of Comparative Retail Price Systems on the seller's market was considered by Benson and Faminow (1985) and Faminow and Benson (1987) who demonstrated that comparative price reporting affected seller behaviour in experimental markets. Generally, profit levels were higher and less variable, prices higher and price dispersions reduced in test markets. The potential profit of the seller is a function of their price and the price set by their rivals. Thereby, in order for producers to make microlevel decisions regarding profit, it is essential for them to have access to this information.

Previously, the identification of microeconomic information needs were limited. The agricultural industry, possibly because they work closer with the farmer, not the Agricultural Economics profession, appeared to recognize that information provided was not always relevant to individual farm needs. Despite the fact that we are in an

'information age'. "the role of information in concentrated agricultural markets received little theoretical attention to date (Perloff/Rausser 1983:p. 366)."

Rosaasen et al. (1983) identifies information deficiencies within Canada's feed grain market, but is unable to provide resolutions for these deficiencies. Perhaps, because of the gap in marketing information literature there was no direction to take on possible solutions. Though management information was linked to decision making, marketing information was not.

Sporleder (1983) acknowledged an increased awareness of the role of information in microeconomic decision making. Garcia (1983) identified that the types and sources of information used in farm decision making are diverse, and Chavas/Pope (1984) that improving information improves the decision making process. With so many types and kinds of information required and considered important, it is possible that there is a form of information which could improve decision making which has been overlooked by the profession.

During this time, a few studies were conducted in Alberta and Saskatchewan regarding farm information sources (Furtan 1981, Alberta Agriculture 1986, O'Neill 1985). An Alberta Agriculture study (1986) and a Saskatchewan Pool study (O'Neill 1985) determined the most important sources of information as farm magazines and papers followed by radio and television. Business management was considered one important subject in both surveys. Daily market information was considered important in the Alberta Study. Some need for improvement of the information was cited. An increased concern over the lack of and irrelevancy of much outlook and

marketing information developed.

A paper presented by Martin (1984) on Outlook Information in Canada led to the following comment:

> My perception of what the system produces relative to my perception of the demand for information leads to the conclusion that most of the product in Canada is largely irrelevant. There are apparently very few outlook programs which are based on an assessment of the decisions which producers and agribusiness firms must make and an assessment of the most effect methods of delivering the information (p. 14).

Martin's conclusion that there is a "gaping hole" in the supply of outlook is partly because the providers of information lack an understanding of the decision making environment since they are 'far-removed' from the actual users. In regards to the specifics of this paper, the type of marketing information needed for improved farm management decision making has not been recognized or provided because the agricultural economic profession does not appear to clearly understand the role of marketing or the type of information required. This is not out of deliberation, but because past needs in marketing required macroeconomic solutions and only now, with an information explosion and an increased awareness by the decision maker, has the importance of appropriate information been realized. "The Agricultural Economist's data base is not significantly segregated at the present time to allow them to perform analyses on less than a macro basis" (Turner 1983:p. 27). Available information is suited for macroeconomic analysis of marketing systems, but not the effects on individual sectors. This

irrelevancy was further emphasized at the 1985 CAEFMS[2] Annual Meeting which focused on outlook and information needs. Both Walker (1985) and Hayward (1985) cite the increasing irrelevancy of market outlook information in regards to the user's focus. It is necessary to determine what type of information is critical to be utilized in the farm decision making process (Goddard 1985). Information reaching the producer is "appropriate only by coincidence rather than design" (Driver/Onwona 1986:p. 158).

Providers of market information in the private sector are more aware of the irrelevancy of market information since providing appropriate information is essential for attracting clients. In recent years these companies, such as Infomart (Grassroots is the agricultural product marketed by Infomart), have conducted market surveys to determine the needs of their clientele (Ekos Research 1985). However, in the profession regarding market information no previous studies have determined whether the theoretical needs complement the perceived needs of the farmer. While the profession continues to deliver macroeconomic information, the industry and the farmer seek the microeconomic data required for individual decision making.

One example of these microeconomic needs has been recognized by the Government of Saskatchewan which published comparative price information for farm inputs (Sask. Agri. 1986), presumably improving competition in the market place, and thus, benefiting the farmer in the same manner that improved consumer information was beneficial in Devine's studies during the 1970's.

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[2]Canadian Agricultural Economics and Farm Management Society

An argument for integrating marketing as part of farm management decision making, a crucial step for fulfilling the gap of literature in marketing information, was presented by Loyns et al. (1986). They contend that this is "nothing new", but only what business and many farmers have done for years. "While we attempted to observe that this is merely citing the obvious, it is not all obvious when judged by what comprises our literature, our research and indeed, our professional mind set (Loyns et al. 1986:p. 3)." The lack of understanding of marketing's role in decision making is a possible explanation of the inadequacy of marketing information. Public sources primarily focused on macroeconomic data in the past because marketing was not considered a microeconomic concept. Loyns et al. suggests that micro prices may be, and usually are, different from macro prices. In addition, macroeconomic data are given, implying that the individual has no choice or control over its effect (see Section 2.1 and 5.1). Microeconomic information offers choices and control to the firm. However, it is added that though microeconomic information is important, it is not sufficient.

Indeed, an attempt to fulfil the literature gap by experimenting with the concept of additional information on a microeconomic level should combine the efforts of marketing and farm management economists to discover better information for their clientele, the farmer.

Chapter IV

THEORETICAL BACKGROUND

4.1 INFORMATION ECONOMICS

Since information is an explicit variable which must be acquired during the decision making process, maximum profit (utility) is obtained through optimal information search. "The pursuit of profit has become the pursuit of knowledge" (Shackles 1970). Technology and information are positively correlated.

The acquisition, storage, and utilization of information is a major business activity which may be more important than other inputs: land, labour, and capital (Lamberton 1972). Accumulating and processing information is a continuous process which influences decision making and reduces uncertainty. Information has a value and can assist in bargaining. That accumulated is only partly retainable through the learning process. It is important to remember that information is imperfect - even prices never reflect all information (Sanford/Stiglitz 1976) - and consequently, uncertainty can never be eliminated. Information, as a structural variable, improves competition and provides benefits to even those who do not use it (see Chapter 3).

Information is a scarce resource for which the law of diminishing returns applies (Stigler 1961). That is, eventually a point is reached where each additional unit of information purchased will add less benefit

to total production (utility) than the previous unit. Information has a cost: procuring information uses time and money of the firm. Therefore, the firm is only willing to acquire additional information if marginal costs are lower than marginal benefits received. An error in decision making due to misinterpretation, inappropriate or lack of information results in reduced returns to the farmer. That is, the marginal benefits do not materialize.

If a more appropriate form of information requires less time and money for accumulation and utilization, the willingness of the farm firm to gather the information will increase, thus, reducing uncertainty and improving decision making. Griffith (1976) emphasizes that for an efficient marketboth the accuracy and timely provision of market information have to be satisfied as necessary conditions.

4.2 DECISION MAKING THEORY

Ideally, a decision maker knows all his alternatives and the relevant information on each. In reality, she/he doesn't. As a consequence, uncertainty exists.

Decision Making Theory attempts to describe economic behaviour under uncertainty. The rational individual is confronted with alternatives from which she/he must choose without knowing the probability of any one outcome. However, it is not necessary for all individuals to behave rationally in order to benefit from those who do behave rationally. Also, the choice made does not influence the actual outcome. The

individual seeks to maximize profit (utility) via the process of decision making.[3]

There is no best criterion for selecting alternatives under conditions of uncertainty because the decision maker's attitudes and policies affect his choice. This is one reason why the objective is often referred to as maximizing utility rather than profit.

There are a number of decision rules which the individual may use in order to choose what she/he feels if the best choice. The most common of these are:

> Maximin Rule: The individual chooses the worst outcomes (lowest utilities) and chooses the worst which is least bad.
> Maximax Rule: The individual chooses the best outcomes and chooses the best which is most good.
> Hurwicz Rule: The individual takes into account both of the above.
>
> (Thomas 1972:p. 35-36).

The farm firm, as a rational decision making unit, must choose from available marketing information. The farmer's marketing decision based on the information obtained helps her/him in achieving his objective. However, it will not affect the overall economic outcome of the country.

4.2.1 A Model of Decision Making

"One cannot specify what information is required for decision making until an explanatory model of the decision process and the system involved has been constructed and tested (Ackoff 1967:p. 27)."

---

[3]Little economic literature has been completed on behaviour under uncertainty. Most is written regarding behaviour under risk in which there is a probability associated with each possible outcome. Recently, Cannon and Kmietowicz have examined the possibilities of combining risk and uncertainty by ranking each alternative in order of likeliness.

Therefore, it is necessary to conceptualize a model of the farm management decision making process.

For the purpose of this thesis it is essential to understand marketing as a component of farm management decision making rather than as an event occurring after production (Loyns, et al. 1986). Information processing is central to farm management decision making and thus, acquiring information influences alternatives of all activities. Marketing and production must both be included internally in microeconomic decision making. However, all internal activities are constrained and influenced by external macroenvironmental forces. For this reason, neither micro or macroeconomic marketing information is sufficient alone. Both must be available to be used at the appropriate time in the decision process. As marketing was previously viewed as macroeconomic, there is little, if any micro-marketing data and information available in a usable form which is required at the decision making level.

A combination of the farm management process including marketing (Loyns et al. 1986) and the business decision making process is illustrated for the purposes of this paper (Diagram #5). The microeconomic information includes that within the radius of the circle. The macroenvironmental forces are those on the exterior of the circle. Market information was recognized by Phillips (1968) as the centrepin of the whole marketing system and is such in the model formed on the following page. Thereby, efforts to improve marketing information services should improve the system.

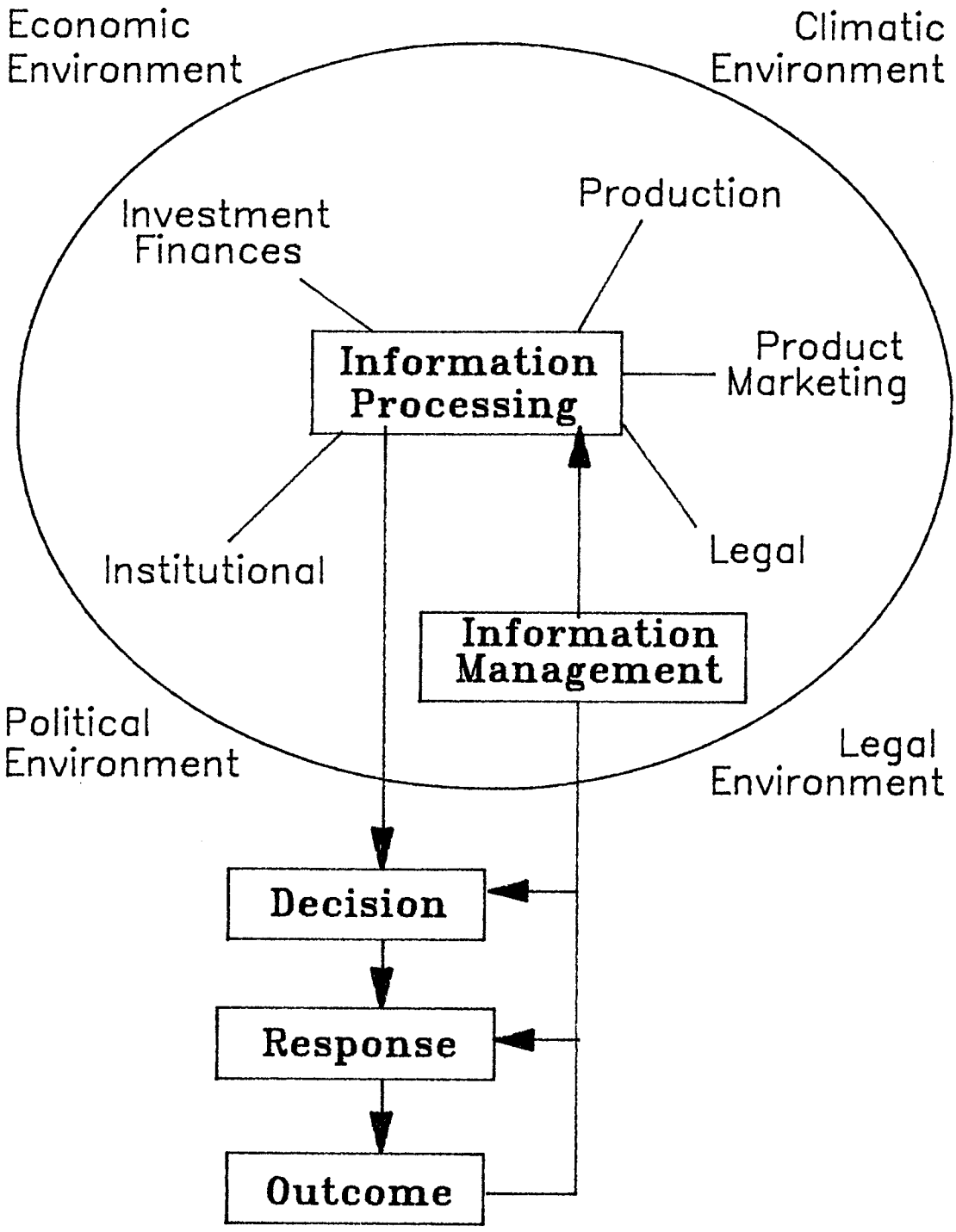
Information from all sources must be combined and processed in

order for a firm to make a decision. Farm Management is the processing of information as illustrated in Diagram 5. "The response of producers to changing economic (market) conditions depends upon their ability to decode the new information and adjust their production processes accordingly" (Furtan 1981).

The outcome from the response will provide new input to consecutive decisions as indicated by the arrows in the diagram. The new information provided as a result of the outcome may influence future decisions and responses which are related. Thus, farm management decision making is a continual learning process. The ability of the individual to manage the information, along with the accuracy and appropriateness of this information will influence the success of her/his decision. Even those who are providers of information must process the information to determine what is to be reported and how. This is further discussed under Information Sources in Chapter V.

DIAGRAM 5

FARM MANAGEMENT
DECISION MAKING PROCESS



Chapter V

A REVIEW OF CANADIAN GRAIN MARKET INFORMATION NEEDS AND SOURCES

5.1 THE ROLE OF MARKETING INFORMATION

In general, information reduces risk and uncertainty by improving the determination of probabilities and reducing the risk of a wrong decision by providing the best estimator possible. To achieve this, relevant and accurate data must be provided, and the decision maker must be able to process the information she/he collects. In addition, information should reduce the incidence of rumour, the class of information which possesses the greatest amount of risk. Appropriate information should minimize error in analysis and thereby, optimize the use rate of the individual for that information. Finally, by defining marketing information specifically as outlined earlier, it should provide a contextual background for principles in decision making.

Market information should enhance the operational efficiency of the market system. This efficiency depends primarily on the provision and use of market information (Griffith 1976). As early as 1961, Clodius and Mueller indicated that in "the absence of critical research results, the provision of information on a wide scale basis can be justified on the assumption that more information produces better conduct and performance than less information (p. 529)." In addition, improving information will

positively affect market structure, conduct and performance by 'sharpening price' (Clodius and Mueller 1961). Both of these statements support the concept of the usefulness of macroeconomic information. Improved information enhances the efficiency of the total market. However, Smith (1962) stated that "it may be misleading to assume that because a farmer reads or listens to market reports it affects the decision he makes." Microeconomic information which is specific to a particular firm reduces the risk and uncertainty of the firm, directly affecting the outcome of a decision. The role of market information may vary depending on the requirements of buyers and sellers under different market arrangements.

In the Canadian grain industry this could mean that different information is needed for specialty crops, major nonboard crops (flax, rapeseed), board crops (wheat, barley, oats), and off-board crops (feed market) because of the existing institutional structures. Mueller and Marion (1983) question whether, "the type of information provided by government programs has kept pace with changes in organization of the food system so that it is relevant for private decision makers (p. 30)."

The public exporting organization for Canadian grain, the Canadian Wheat Board, is the buyer of certain grains for Western Canadian farmers. The Canadian Wheat Board as a public organization, and large private grain companies have access to much more information and resources available for its analysis than individual farmers. Such marketing firms may be inclined to provide varying amounts of information -- perfect, partial, none or misinformation -- as part of its dealing and strategies. The buyer, which deals with aggregate markets attempts to satisfy the

individual farmer's needs with information applicable to the buyer, forcing the farmer to make marketing decisions without adequate information.

Even if we assume pure competition exists in the grain industry, and the farmer has no control over the price of the product, she/he still needs market information. Purcell (1979) states that even if the farmer has neither the necessity or the ability to make pricing decisions, it does not mean that the "individual decision maker should ignore analyzing and understanding the discovery and behaviour of price. In fact, the opposite is true. If the capacity to influence price is denied the firm, the ability to anticipate and react to moves in the industry-determined price is even more important (p. 13)." As a result, even under pure competition price information must be supplied to the producer (firm) so that she/he can react to price by changing production decisions.

However, the Candian Grain Industry can not be considered a purely competitive market. Time, place and form dimensions of the market provide price variations to the producers. Within the grain industry, the producer has options of time (cash vs futures), options of place (basis variations) and options of form (quality variations). Price formation and arrangements (Loyns 1985) and price discovery and behaviour (Purcell 1979) both indicate the need for considering these dimensions of the market. Price information is necessary for the individual to make farm management decisions regardless of market structure limitations. The different marketing channels, each comprised of specific time, place and form dimensions, are the options (price arrangements) available to

the farmer which provides her/him with choices in making a marketing decision reducing the uncertainty which exists.

5.2 MARKET INFORMATION NEEDS

Market information encompasses much more than just pricing data, forecasting and outlook. As a result, "the manager who does not understand the phenomenon he controls plays it 'safe' and, with respect to information, wants 'everything' (Ackoff 1967:p. 27)." However, due to time, volume and money, it is not possible to view 'everything'. It is necessary to determine what information is needed and what information is not necessary for any one type of decision.

With marketing part of farm management, marketing decisions affect other aspects of the farm management process. Therefore, it is necessary to provide information which will limit the negative effects on these other areas. With marketing viewed as a macroeconomic concept, market information has been concentrated in this form. Since decision making is a microeconomic concept, it is necessary to obtain microeconomic information for effective decision making. For marketing decisions, some microeconomic information required is available, whereas some may be difficult to obtain. As outlined in the literature review, there is a recognized need for more microeconomic data and information. However, macro and micro levels of information are required from all aspects of the decision making model for effective decision making. Perhaps, a process is needed to transform the more readily available macroeconomic marketing information into a format appropriate for the micro level

decision. To illustrate the distinction between macroeconomic and microeconomic information, some examples are listed below.

EXAMPLES OF MICRO AND MACROECONOMIC INFORMATION

Activity	Macro Information	Micro Information
1. Legal	Canadian and provincial regulation	terms and conditions of individual sale
2. Political	policy changes effects on markets	program qualifications and requirements
3. Economic	world and Canadian supply and demand interest rates	lender rates local cash price farm financial analysis
4. Climatic	world weather patterns	local rainfall and temperature
5. Marketing	price forecasts price formation	selling options price arrangements

5.3 MARKET INFORMATION SOURCES

Griffith (1976) suggested two aspects of market information; reporting, which is past information, and forecasting which is futuristic. For this thesis, information sources for grain marketing within Canada were divided into four categories: reporting which refers to current data and information; records which refer to those preserved as historical happenings or data; forecasts which are the futuristic information; and analysis which uses records and forecasting to predict further, explain what has happened, or provide an understanding into the mechanics of the market.

Depending upon the presentation of the data, and the components which derived the values, the information within the source could be

macroeconomic or microeconomic. To determine whether some sources are more inclined to provide one or the other is not the purpose of this thesis. However, a distinction should be made between single and multiple sources of information. This distinction becomes significant in the analysis and results (Section 7.3). The items classified as records or forecasts tend to be single sources, whereas reporting and analysis sources tend to be a compiling of information from a variety of sources. For example, the information from USDA reports, and Statistics Canada reports come from a single source. On the other hand, Information Radio may cite some of the data from these two sources, along with providing newscasts and interviewing people who have obtained their information from these and other records. Also, Telidon reports information from a variety of sources. However, it also provides a moving average calculation which is a form of analysis. Both radio and Telidon are mediums through which information can be obtained.

To follow is a listing of single and multiple information sources available to Canadian grain farmers.

Category	Source	
1. Reporting:	Provincial Agriculture	- weekly reports
	Winnipeg Commodity Exchange	- newsletter, weekly reports, daily quotations
	Canadian Wheat Board	- quota update newsletter
	Canada Grains Council	- newsletter
	Grain Elevators	- crop reports, Grainnews(UGG), grain broadcasts
	Producer Associations	- newsletters
	Banks	- reviews, newsbrief

	Newspapers and magazines	- Man. Co-operative Western Producer Globe and Mail Wall Street Journal
	Electronic	- Telidon, CBC - Information Radio Television
2. Records:	Statistics Canada	- Field crop series, Grain Review
	Canada Grain Commission	- weekly and monthly reports
	Canadian Wheat Board	- Annual and producer reports
	Winnipeg Commodity Exchange	- statistics annual
	Canada Grains Council	- Statistic Handbook
	Agriculture Canada	- Market Commentary
	Manitoba Agriculture	- Quarterly Market report
	Grain Companies	- market newsletters
	Commodity Research Bureau	- Commodity Yearbook
3. Analysis:	Provincial Agri. Reports	- Alta., Man., Sask.
	Alberta Wheat Pool	- Market Update
	Brokerage Firms	- Research letters
	Agriculture Canada	- Market Commentary
	US Dept. of Agriculture	- crop, grain stock for USA and world
	Commodity Research Bureau	- Chart Service
	Universities	- Research reports
4. Forecasts:	US Dept. of Agriculture	- Agricultural Outlook, December each year
	Agriculture Canada	- Agricultural Outlook Conference
	Manitoba Agriculture	- Outlook
	Statistics Canada	- periodicals Production forecasts
	Grain Companies	- Production forecasts

Chapter VI

ANALYTICAL APPROACH

The general model developed in this proposal for investigating the needs and sources of market information will be the framework used to approach the objectives normatively and the empirically. The research based on the background provided will be comprised of three parts, determining the normative, identifying the sources available and, conducting a survey to determine the needs and sources of grain market information in Canada.

Firstly, it is necessary to determine the normative; what is theoretically required or ought to be required on a macro and microeconomic level. This includes a thorough textbook and theoretical review regarding what information influences the market and what is required to make marketing decisions (see section 5.2). Theoretically, both macro and microeconomic forms of information should be required.

Secondly, the information sources available to farmers will be identified. It is believed that both microeconomic and macroeconomic information is presently available. An outline of available information sources within Manitoba are listed in section 5.3. In addition, a specified listing of futures market information, The Futures Market Inventory, has been compiled and is described in Chapter VIII.

6.1 THE NORMATIVE

To determine what market information is considered important normatively, market information was defined (section 2.2) and a review of the literature conducted (Chapter III). This provided the background for determining what market information 'ought to be'. The concerns the past research expressed were used to describe Market Information Needs (Section 5.2) which were used to develop the model in section 4.2.1 illustrating the components of farm management decision making which would affect a market decision. The author attempted to define macroeconomic and microeconomic information based on the definitions of the micro and macroeconomics. From this 12 items were chosen for each which were considered the theoretically accepted components of information for producer decision making in marketing, yet could be classified as either micro or macro. Items representing these components were used in question B and C of the survey.

However, there were contradictions in the interpretation of these items. When the results were not as significant as expected, a random sample of graduate students were asked to classify the items in question B and C into the two categories. The microeconomics items were very easily defined. However, many students interpreted those classified as macroeconomic items to be either micro or macro. Some said they could be both. As a result, the macroeconomic items in the questionnaire could have been answered differently if more precisely defined macroeconomic items had been used.

6.2 INFORMATION SOURCES AVAILABLE

The next step of the study was to determine the sources from which market information could be found in Canada. Government and business were contacted. Previous papers (White 1972, Martin 1982, McKay 1985) and surveys (Furtan 1981, Alta. Agri. 1986, Ekos Research 1985) were consulted. The list of sources was used in developing question D of the survey.

An extension of this exercise led to a project compiling an Inventory of Futures Market Information across Canada. All aspects of futures - financial, metals, indices, options and commodities were covered. The inventory is described in Chapter 8 of this thesis and the portion of it dealing with Commodity Futures is included as Appendix C as an example of sources available within this area. This shows that a much more extensive list than that in section 5.3 can be developed given the resources. However, futures market information is only one aspect of all marketing information and the inventory shows the limited extent of information available within the Canadian context in this area.

6.3 SURVEY APPROACH

6.3.1 Survey Design

The survey was designed with four basic questions. Question A asked the respondent to provide the items that he would like to see included in an 'ideal' package of grain market information. This open ended question was asked first in order to determine what the farmer thought was important without having her/him limited to the items listed. An estimated value of this information was then requested.

The following three questions all asked the respondents to rate on a scale of one to five various items. Question B asked for a rating of the degree of importance of a list of 24 item, 12 classified as microeconomic and 12 classified as macroeconomic. This question was used to test the first hypothesis. The first part of question C was constructed a similar manner to question B, but tested the availability of information by comparing the differences in ratings of the microeconomic and macroeconomic items. The second part of question C was used to test the need for more information by the same technique. Question D was used to rate the degree of use of different sources of information.

The final question of the survey asked the farmers about themselves in order to collect the demographics on the group survey. The actual survey is in Appendix A.

6.3.2 Distribution of the Survey

A survey was conducted among commercial grain farmers in Manitoba to determine their opinions on market information requirements and availability. It was felt that surveying producer organizations, crops clubs and those who attended the short course, would help ensure that those surveyed were aware of and had an understanding of marketing alternatives, valued information as a resource and were familiar with available sources. This is a fair assumption based on the conclusions of Driver and Onwona (1986) who determined that the frequency of use of information rises with technology level. The mail out survey described above was used along with telephone contact to increase the return rate.

The survey was designed to corroborate or reject the three hypotheses by questioning the producer on available information, sources utilized, and desired information he/she feels would be beneficial. A pretest was conducted on farmers participating in a Futures Short Course offered by the University of Manitoba in February 1988. As a result, one question was eliminated from the actual survey due to difficulties in wording and the conclusion that the question did not provide information needed for the objectives outlined. The actual survey was conducted in four parts.

The first group surveyed were a group of 35 participating in a Futures Market Short Course offered by the University of Manitoba in early March 1988. 25 surveys were returned.

The second group surveyed were the members of the Dauphin Crops Club in Dauphin, Manitoba. The survey was taken to one of their meetings and all 21 members present filled in the survey. Because both of these groups, Short Course and Dauphin Crops Club, were surveyed in person, there was a very high return rate.

The third group surveyed was a random sample of 100 farmers selected from the Manitoba Canola Producers Association membership list. The survey and cover letter attached were mailed in early April 1988. The letter informed the producers that they would be contacted by phone in order for their responses to be collected. About a week later phone calls were made only to discover that the questionnaires had not yet been completed. A second phone call over the following three weeks resulting in 51 surveys returned. Some of the replies were mailed in.

The fourth and final group contacted were members of the Western Canadian Wheat Growers. Firstly, the Manitoba directors and executive

members were contacted in early April and phoned to obtain the results. 12 of 21 directors completed the questionnaire. Secondly, a random sample of 100 farmers were chosen from the list of Manitoba members. Surveys were mailed late April. Only 10 surveys were returned by late May. Phone calls were made to participants as reminders to return the survey. This resulted in an additional 24 surveys returned.

Chapter V11

ANALYSIS AND RESULTS

Information is one input which is present throughout the decision making process. Determining what information is needed and where it can be found is a continual problem for decision makers. Farm Management decision making requires particular information which can vary with individual circumstances.

The general objective of this thesis was whether there was a need for particular types of information by analyzing the needs and sources of marketing information for Manitoba grain farmers. This information was categorized into two forms, microeconomic and macroeconomic. Specifically, the objectives are:

1. determine which type of information is a priority to farmers. It is hypothesized that farm management decision making requires both microeconomic and macroeconomic orientated information on the markets in which farmers operate.

2. determine whether microeconomic or macroeconomic information is more readily available at present. It is hypothesized that macroeconomic information is more readily available.

3. determine whether the market information now generated is meeting farmer's needs by establishing a need for additional microeconomic and macroeconomic information at the producer level. It is hypothesized that

there is a need for more microeconomic information.

Through out this chapter, the model discussed in section 4.2.1 (diagram 5) will be used to analyze the data collected from the four different groups. That is, assume both microeconomic and macroeconomic information exists in the environment in which farmers make decisions. The results pertinent to each objective will be summarized separately with respect to each group and collectively in order to determine whether the hypotheses regarding microeconomic and macroeconomic marketing information hold. Details of the results can be found in Appendix B. Initially, it is necessary to review the demographics in order to describe those who participated in the samples.

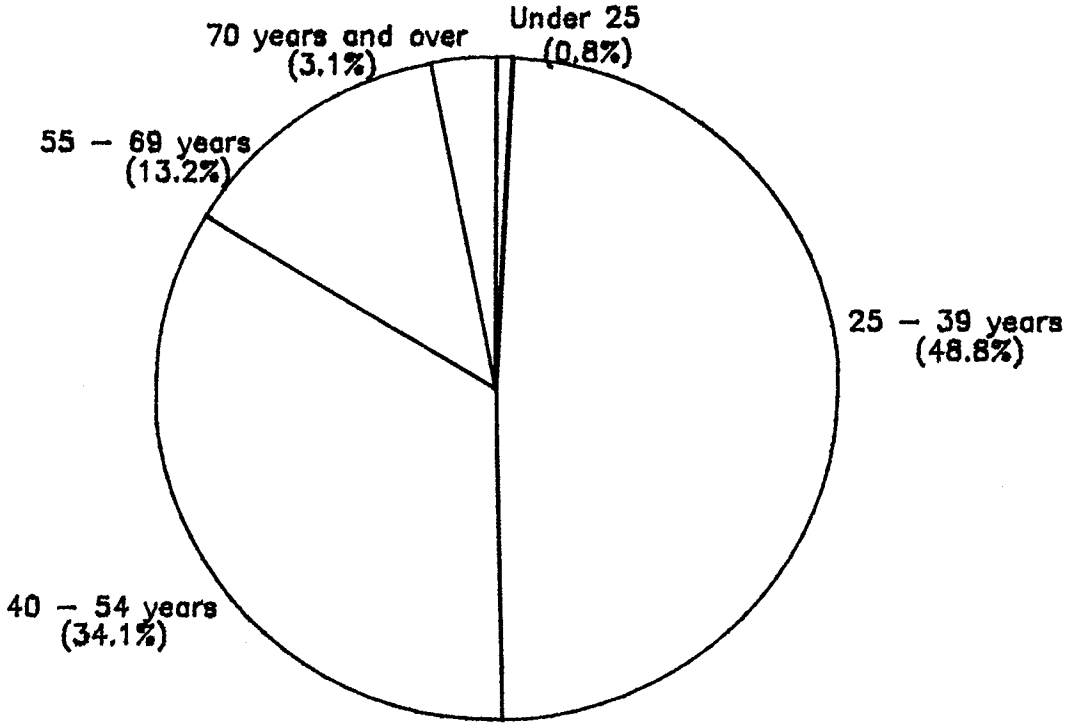
7.1 DEMOGRAPHICS OF THE COLLECTIVE GROUP

The demographics of the four groups were combined to determine the general characteristics for the collective group, illustrated on pages 47 - 50. The sample was a select group, and was not an average representation of Manitoba farmers. Not all respondents completed every question. As a result, any differences between the stated percentages and 100 is accounted for by this missing data. About 81% of the farmers were between the ages of 25 and 54. The members of the Canola Growers and the Wheat Producers were older than the other groups with approximately 40% of respondents between the ages of 40 and 54. 90% were full time farmers, 36.6% of whom had no commercial livestock within the last three years. Over one third of those surveyed had a University degree, while an additional 14.7% had some University. In contrast to the other groups, the largest proportion of producers in the Wheat

Graph 1

FARMER'S AGE

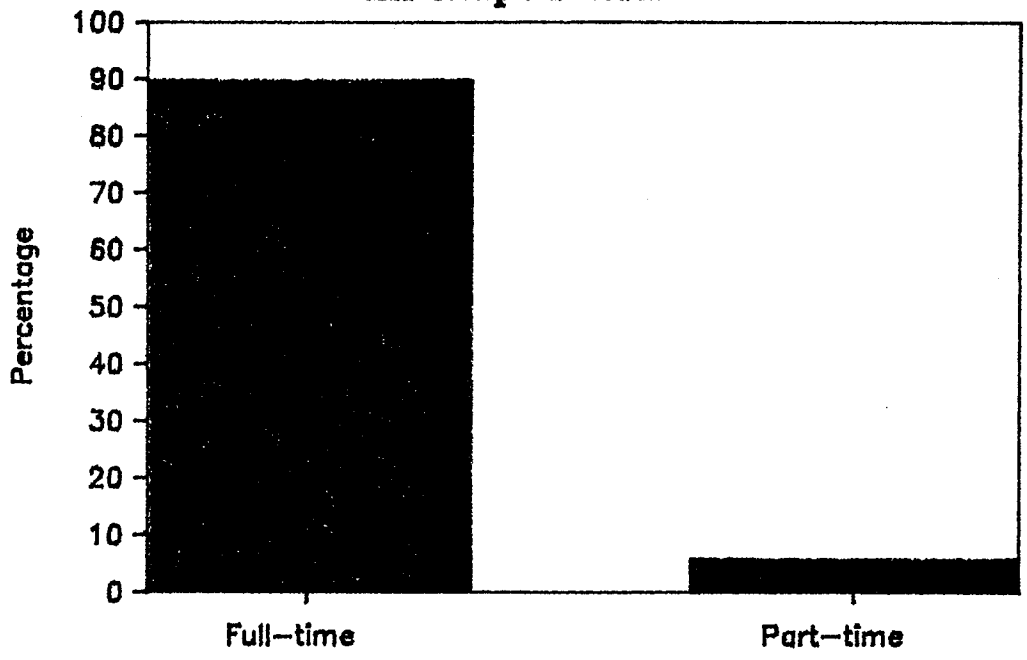
All Respondents



Graph 2

FULL OR PART TIME FARMERS

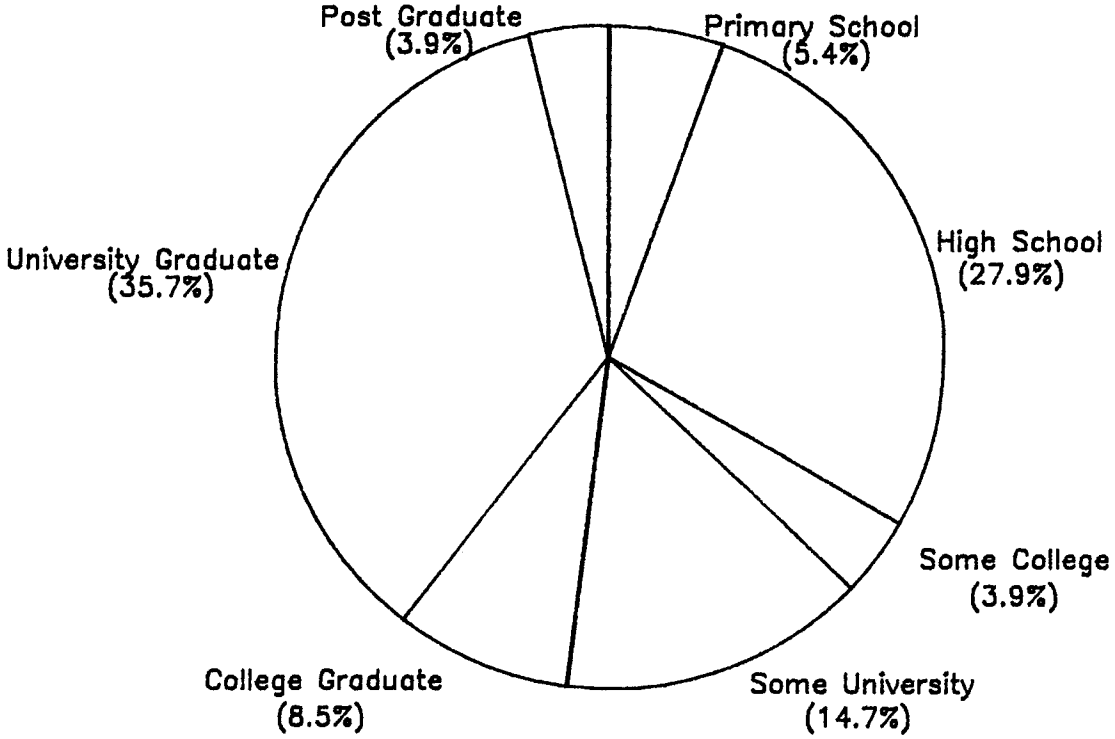
All Respondents



Graph 3

HIGHEST EDUCATION LEVEL

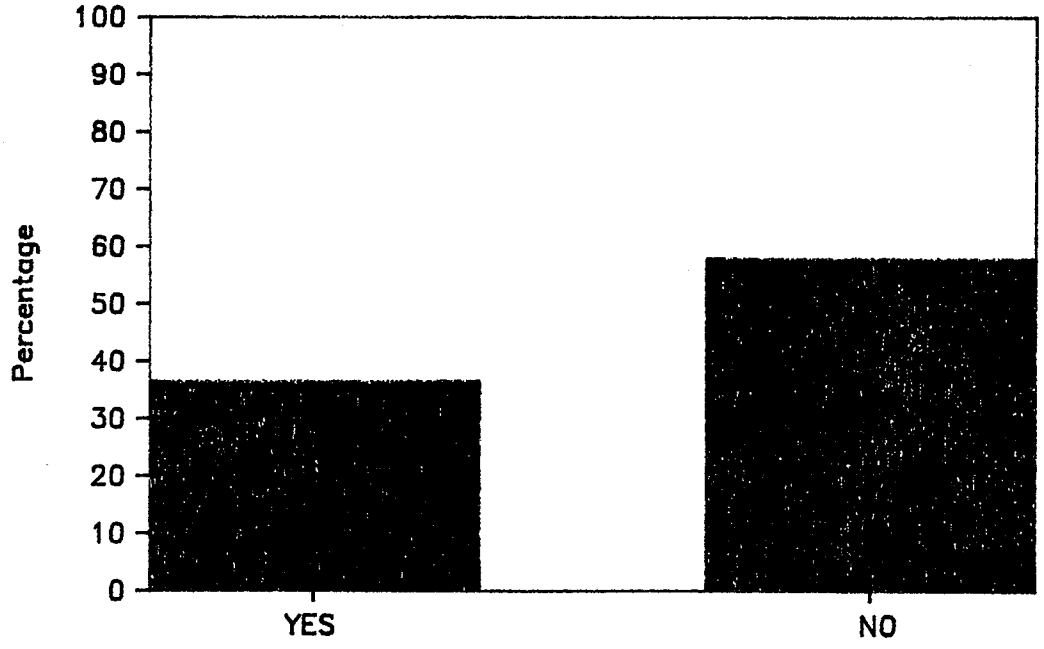
All Respondents



Graph 4

LIVESTOCK OPERATORS

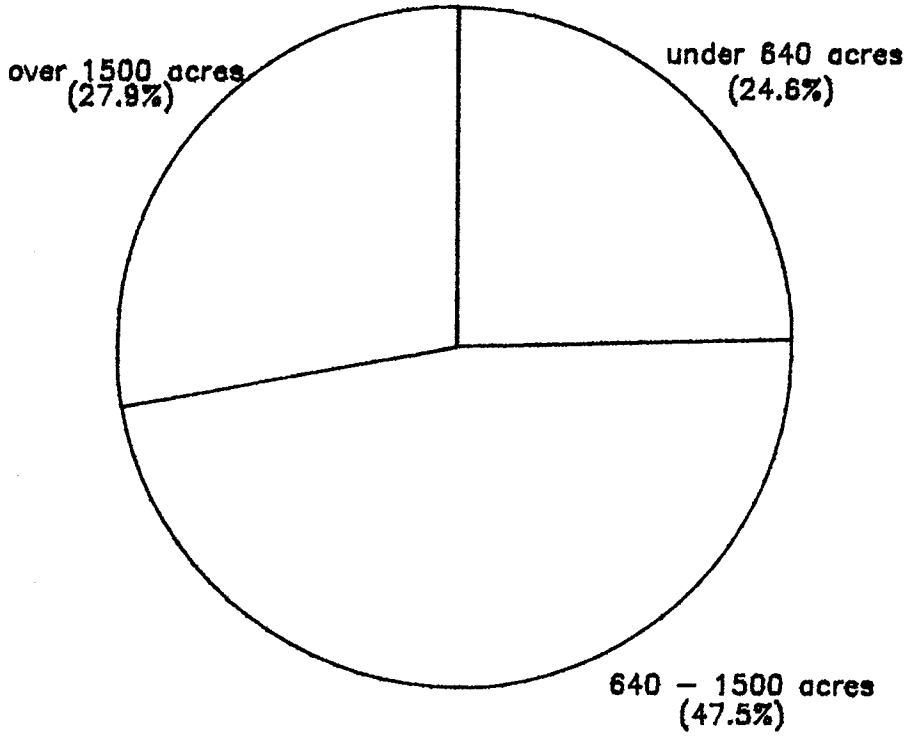
All Respondents



Graph 5

FARM SIZE

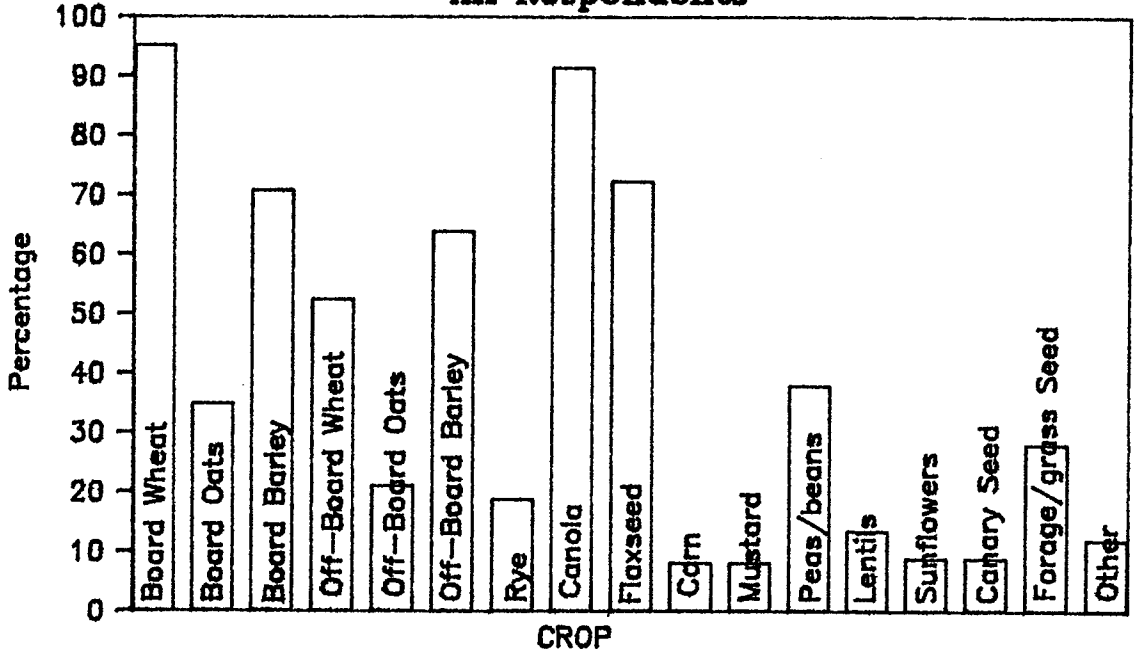
All Respondents



Graph 6

CROPS GROWN

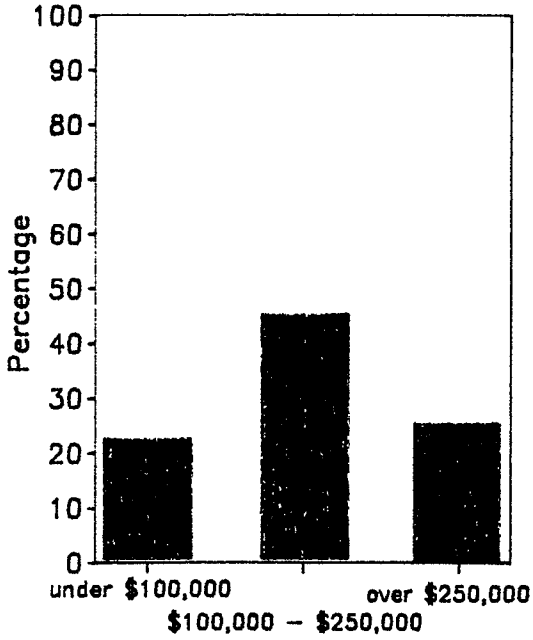
All Respondents



Graph 7

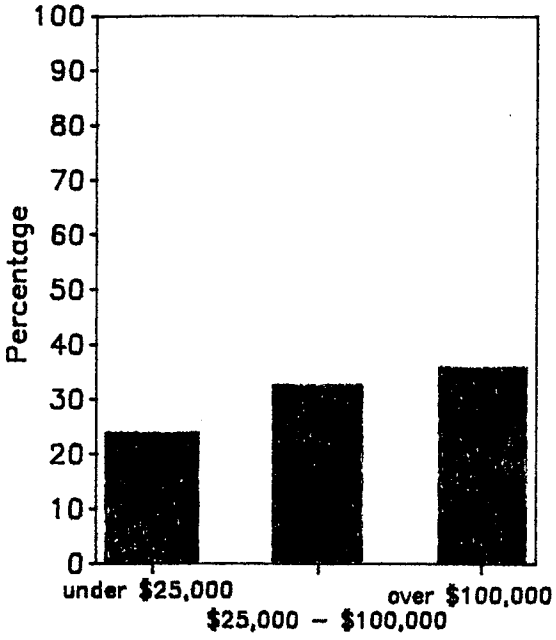
REVENUE LEVEL

All Respondents



Graph 8

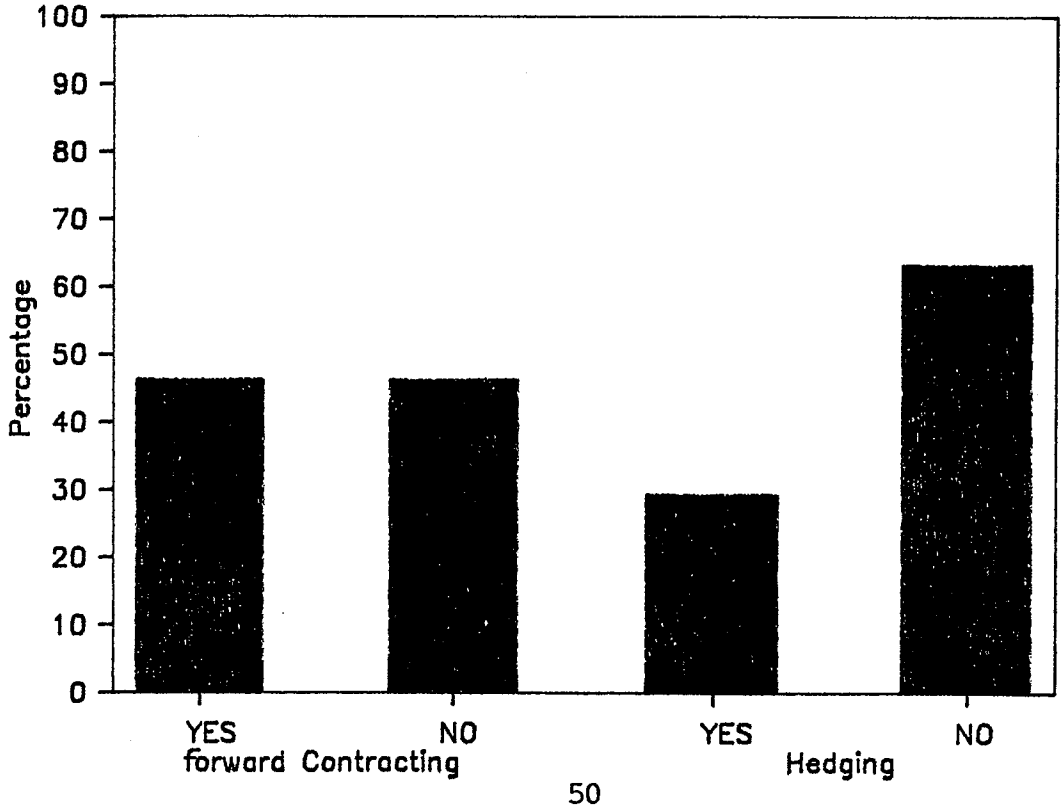
DEBT LEVEL



Graph 9

FORWARD CONTRACTING AND HEDGING

All Respondents



Growers group, 35.29%, had only high school educations. Wheat sold on-board, canola, flax and barley sold on-board were the most commonly grown crops within the last three years. Nearly 50% of farms were 640 - 1500 acres in size. The average annual gross revenue for 44% of the farmers was $100,000 to $250,000 with about one third of farms having average outstanding debts exceeding $100,000. Nearly 50% of farmers used forward contracting on a regular basis, while only 29% used hedging. Comparative graphs and charts of the four individual groups can be found in Appendix B.

7.2 ANALYSIS OF THE OBJECTIVES

7.2.1 Results of the Aggregate Group

The response rate for all groups surveyed was over 30%. Those people contacted by phone were very interested and wanted to talk about not only the survey, but questions and comments which arose from their answers. Producers realized the importance of information in their decision making.

Firstly, a regression was done with the need as a function of the availability and importance for each item to determine that the responses were consistent with the logic behind the establishment of the questions. For each group and for the total, both coefficients, availability and importance were over 99.5% significant. Availability was a negative coefficient and importance was a positive coefficient. This is consistent. If an item is important and not available, more of it should be desired. On the other hand, if it is important and all ready

available, more should not be required. The coefficients and t-test results are summarized in Table 1.

In addition, chi-square tests of independence were run to determine any relationships between the value, preference and need of information, and the use of hedging or forward contracting. None of the tests proved significant (Table 7, Appendix B). The value of information had no relationship with either the use of hedging or forward contracting. Similarly, there was no significant relationship between those who preferred microeconomic information and those who used forward contracting or hedging or between those who perceived a need for more microeconomic information and those who used hedging or forward contracting.

7.2.2. Objective 1

In order to determine the priority of macroeconomic and microeconomic information by the producer, two question were asked. Firstly, respondents were asked to list five specific items they would include in an "ideal" set of grain market information and how much they would be willing to pay for the set described if it were available. Secondly, respondents were asked to rate a list of information items on a scale of one to five, one being not important and five being very important.

Question A

Due to the openness of the first question, the answers were categorized into the twenty four items used in question b of the survey. Some items which were mentioned by respondents, but not included in the list, were added. A summary of all replies is listed in Table 2, p. 54.

The majority of items listed by all groups were macroeconomic

TABLE 1

NEED AS A FUNCTION OF AVAILABILITY AND IMPORTANCE

	VARIABLE									
	SHORT COURSE		DAUPHIN CROPS CLUB		CANOLA GROWERS		WHEAT GROWERS		TOTAL	
	Importance	Available	Importance	Available	Importance	Available	Importance	Available	Importance	Available
X Coefficient	.642	−.620	.652	−.462	.848	−.820	.658	−.552	.641	−.464
Standard Error	.123	.104	.138	.137	.108	.089	.199	.169	.174	.147
t−test	5.220	−5.980	4.720	−3.370	7.830	−9.210	3.310	−3.270	3.680	−3.160
Significant ($\alpha \leq .05$)	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
R^2 Value	.68		.57		.83		.37		.44	

TABLE 2

'IDEAL' GRAIN MARKET INFORMATION

Responses for Question A

ITEM	Number of Respondents				
	Short Course	Dauphin Crops Club	Canola Growers	WHEAT Growers	TOTALS
1 Federal regulations on grain					
2 Selling options available to you	2	6	4	8	20
3 Provincial regulation related to grain					
4 Terms and Conditions of Sale			2	2	4
5 Federal policy and program changes		2	5	7	14
6 Individual eligibility requirements for government programs			1		1
7 World grain supply and demand estimates	28	15	32	35	110
8 Local crop production averages	1				1
9 Canadian Wheat Board quotas	2	2	4	8	16
10 Local grain supply and demand estimates		3	7		10
11 Input price trends and patterns					
12 Comparative distributor input prices	1	1	4	3	9
13 Canadian Wheat Board initial prices	3		2		5
14 Comparative elevator street prices		2	8	3	13
15 Canadian Grain Commission handling and storage tariffs					
16 Elevator handling and storage charges			9		9
17 Grain price forecasts	9	7	22	26	64
18 Estimates of the Canadian Wheat Board final payment	3	2	6	3	14
19 Historical price trends and patterns	11	5	14	3	33
20 Transportation charges to your delivery point	6	5	1	5	17
21 General Economic conditions			1	2	3
22 Your farm financial position					
23 Canadian interest rates			2		2
24 Your private loan rates					
25 World news	10		4	1	15
26 Weather patterns and forecasts	6	6	19	12	43
27 Current prices	1	10	13	14	38
28 Futures prices	7	1			8
29 Available transportation		4	3	1	8
30 Grade differentials		1			1
31 Price spreads				2	2
TOTALS	90	72	183	135	460

information with the most popular item being world grain supply and demand. Supply appeared to be more important than demand. Items specifically requested included the imports and exports of competing nations including Canada, actual and projected stocks, disappearance reports, and a list of grain buyers. In contrast only a few respondents thought the microeconomic items, local crop production averages and Canadian Wheat Board quotas, were important. Nearly one half of the responses from the Wheat Producers were listed under world grain supply and demand and grain price forecasts, the second most common item requested. Forecasts were requested on a daily, weekly and monthly basis. However, those attending the Short Course and those from the Dauphin Crops Club listed historical price trends and patterns and current prices more frequently. These as well are macroeconomic.

It is possible that the low response in regards to futures prices is due to an interpretation that market analysis and forecasting involves and often uses futures markets. The Canola Growers were much more specific in their description of price information then the other groups. Both the Canola Growers and the Dauphin Crops Club voiced a concern over the lack of information for specialty crops.

Weather was the third most common factor listed. Farmers requested accurate 7 to 90 day forecasts of Canadian and World weather patterns. Daily weather reports were also specified. Federal policies and program changes and current world news were considered "ideal" information. Respondents wanted news on world political situations, agricultural policies and oil prices.

Of the microeconomic items requested, the most popular was selling

options available which included a variety of specific points such as risks involved with alternatives, comparing alternatives, and the mechanics of alternatives such as hedging and pre-pricing. Transportation appeared to be of significance: individuals wanted basis comparison, transportation charges to their delivery point and listings of available transportation alternatives and costs. Canadian Wheat Board quotas, estimates of the Canadian Wheat Board final payment, and comparative elevator prices were also listed regularly.

The second part of question A asked the participants how much they would be willing to pay for their "ideal" set of grain market information. Since the set varies per individual, the value is only an estimate of what farmers are willing to pay for the information they feel is needed. The values may have been so low because of the interpretation of the word 'pay'. Respondents may not be willing to pay for the information they can receive at present for free. However, this does not necessarily mean that their value of information is that low. They may be value information highly, but may not be willing to pay for it if they perceive that it is freely available. Respondents were willing to pay between $0 and $5000 per year. If an individual gave a range of values, the highest end of the scale was recorded. The values were divided into four categories and are listed by group in Table 3. The Canola Growers had the highest average value at $388. The average value of information over the four groups was $290. Value was considered a function of education, the use of telidon, and revenue. A regression was run similar to a seasonal, with dummy variables for each group. However,

TABLE 3

VALUE OF INFORMATION

VALUE	NUMBER OF RESPONDENTS				
	SHORT COURSE	DAUPHIN CROPS CLUB	CANOLA GROWERS	WHEAT GROWERS	TOTAL
Less than $100	1	7	12	5	25
$100 – $499	14	4	16	15	49
$500 – $999	5	0	4	3	12
$1000 and more	1	1	3	2	7
no response	4	9	16	9	38
Total	25	21	51	34	131
Average value	$357	$169	$388	$247	$290

revenue was the only significant coefficient. Also, the variables used accounted for only 11% of the error.

Question B

In question B of the survey participants were asked to indicate on a scale of one to five what information they considered important in making a marketing decision. The average of each item for each group and as an aggregate group are listed in Table 8, Appendix B. Based on the rated averages, none of which were below 2.50, all items were considered relatively important. Also, the averages of the microeconomic items and that of the macroeconomic items were all over 3.5 out of 5.00, indicating that they are both reasonably important. However, the degree of importance did vary from one group to the next.

In order to determine whether microeconomic or macroeconomic information is seen as more important, the differences between the two must be calculated for each individual. The difference was the microeconomic average for participant x minus the macroeconomic average for participant x. Thus, a positive response favours microeconomic and a negative response favours macroeconomic information. Then, the average and the standard deviation of the differences was determined and the t-test calculated (See Table 4). A @ value of 90% was selected. There was no significant difference in the degree of importance of microeconomic and microeconomic information by respondents in the Short Course or the Wheat Growers groups. In contrast, there was a significant difference between the importance of microeconomic and macroeconomic information for the Dauphin Crops Club and the Canola Growers. However, macroeconomic information was significantly more important than

TABLE 4

THE SIGNIFICANCE FOR DIFFERENCES BETWEEN MICRO AND MACROECONOMIC INFORMATION WITHIN GROUPS

GROUP	QUESTION (α= .10)					
	IMPORTANCE		AVAILABILITY		NEED FOR MORE	
	t-test	significant	t-test	significant	t-test	significant
Short Course	0.13	no	0.11	no	-1.29	no
Dauphin Crops Club	-1.95	yes	1.11	no	-0.58	no
Canola Growers	2.16	yes	-0.52	no	1.18	no
Wheat Growers	-0.72	no	0.50	no	-1.58	yes

microeconomic information for the Dauphin Crops Club and the opposite was true for the Canola Growers.

When measured between groups the Canola Growers were significantly different than the other groups in how strongly they viewed the importance of the microeconomic information items. The t-test statistics are summarized in Table 5, p. 61. There was a difference between the Short Course and Dauphin Crops Club favouring microeconomic information, and between the Dauphin Crops Club and Wheat Growers favouring macroeconomic. However, there was no significant difference between the Short Course and the Wheat Growers.

7.2.3 Objective 2

The same 24 items were used to ask the respondent to rate on a scale of one to five how available the information is to them when they need it. One was considered to be unavailable and five was readily available. Again, all items, as summarized in Table 9, rated above 2.5 out of 5.00 indicating that the information was available. A common comment by producers was that it was available, but it was not in one handy spot. Also, many thought it was available, but were not sure where to find it, or said they could not take the time required to collect it. A t-test statistic was calculated in a similar manner to that described for question B. For all the groups, the results were insignificant. Thus, microeconomic information was perceived as no more readily available than macroeconomic information by the producer. Similarly, t-tests done between samples were also insignificant. There is no difference between the perception of information availability across groups.

TABLE 5

THE SIGNIFICANCE OF IMPORTANCE, AVAILABILITY AND NEED FOR MORE INFORMATION BETWEEN GROUPS

GROUPS	QUESTION ($\alpha = .10$)					
	IMPORTANCE		AVAILABILITY		NEED FOR MORE	
	t-test	significant	t-test	significant	t-test	significant
Canola Growers vs Short Course	1.319	yes	-0.380	no	1.780	yes
Canola Growers vs Dauphin Crops Club	2.287	yes	-1.165	no	1.030	no
Canola Growers vs Wheat Growers	1.944	yes	-0.726	no	1.810	yes
Short Course vs Dauphin Crops Club	1.441	yes	-0.575	no	-0.779	no
Short Course vs Wheat Growers	0.499	no	-0.201	no	-0.460	no
Dauphin Crops Club vs Wheat Growers	-1.416	yes	0.477	no	0.639	no

7.2.4 Objective 3

The third objective was determined by asking respondents to rate on a scale of one to five what information they would like to see more of. One indicated that no more information was needed and five that much more was needed. Asking farmers to indicate a need for more information does not necessarily measure the volume provided, but the quality of that information: more accurate, more timely, or more easily read. White (1972) determine that in regards to information, the two most cited needs which are not met for grain growers was accuracy and timeliness. A study by Agriculture Canada (1982) indicated that accuracy, the logic used to develop forecasts, and the system which delivered information were the greatest inadequacies.

The averages listed in Table 10, Appendix B, indicate that there is a need for more information, but again, the need varies with each group. There was no significance difference between the need for more microeconomic and macroeconomic information for the Short Course and the Dauphin Crops Club. However, farmers from the Wheat Growers perceived there to be a need for more macroeconomic information. Since microeconomic information is more specific to decision making, it is reasonable to assume the farmer has access to that information which is specific to his operation and has less access to that which is harder to control, the macroeconomic environment. The need for more microeconomic information by the Canola Growers was not significant. The difference in need could be due to the market in which the groups operate. For example, selling of canola is done on the open market, while the Canadian Wheat Board has control over the market required by the Wheat Growers.

The on-board crop market is controlled by the macroeconomic forces over which the producer h as little control. He/she is dependent upon the marketing abilities of the Canadian Wheat Board. Many of the decisions are made for the individual who is dependent upon quotas, initial payments and final payments.

The t-test done across groups showed a significance difference between the Canola Growers and other groups. The Canola Growers perceived a need for more microeconomic information in comparison to the Short Course and Wheat Growers. In conclusion, there is a need for more microeconomic information depending upon which market the individual operates in.

7.3 INFORMATION SOURCES

The final result from the survey was to determine the information sources from which farmers found their information. This was done in two parts. Firstly, question D in the survey asked the respondents to rate on a scale of one to five, one being never used and five being used daily, how often various information sources were used by them. Secondly, a survey was conducted to compile an Inventory of Futures Markets, to determine the specific information available for farmers in this area. This is covered in Chapter 8 of the thesis.

From Question D, electronic media appeared to be the most popular sources of information. Radio rated the highest for all groups. Television and Telidon were also highly rated by all groups. The high use of television may be for weather and political information from daily news. With the exception of the Short course group, the second highest

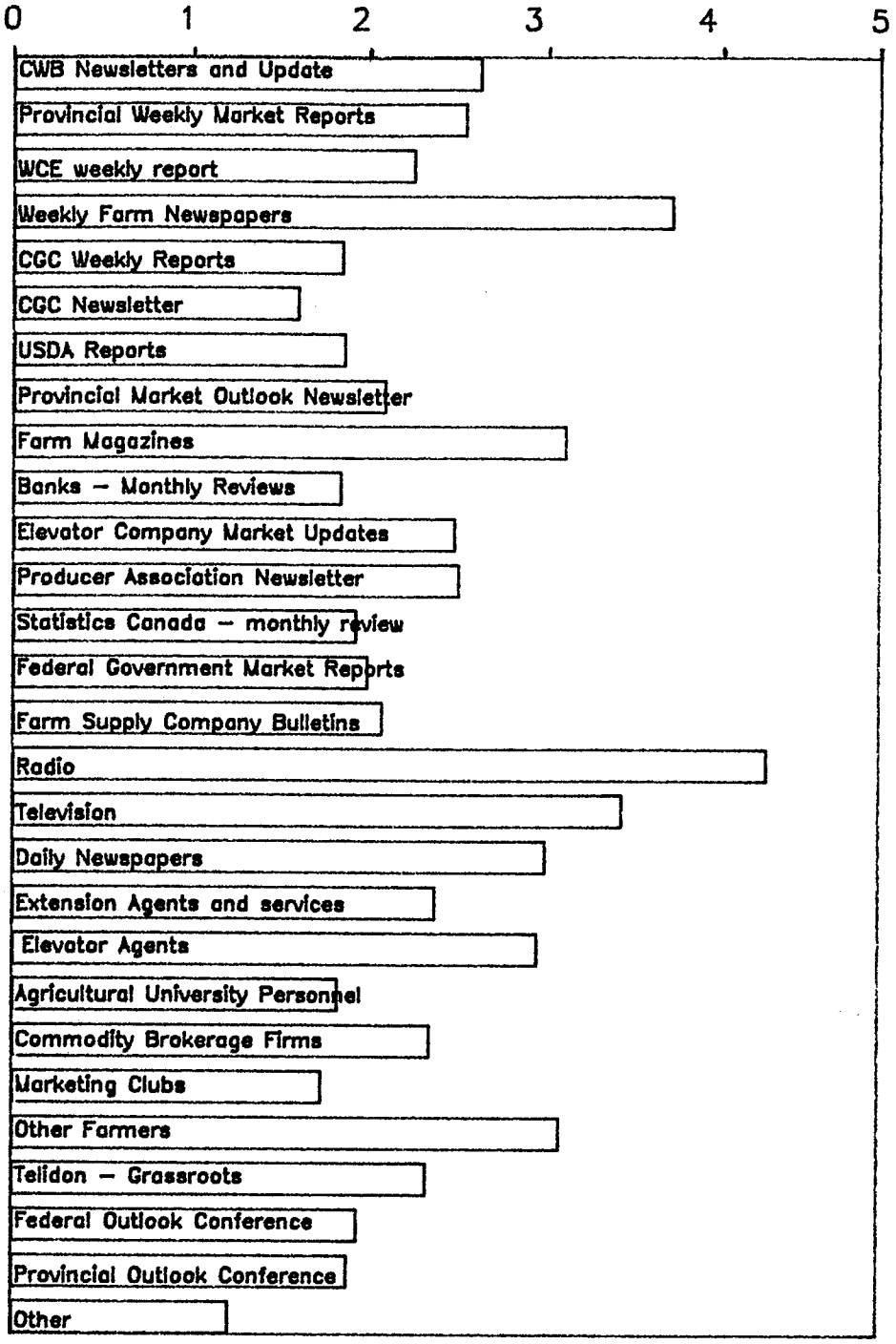
rating was for weekly farm papers. Farm magazines and daily newspapers were also used regularly. The Dauphin Crops Club relied the most heavily on written material. A concern was expressed that the source of information should not be directly provided by those within the industry who may write to their own benefit rather than for that of the producer. Personal contact with other farmers, elevator agents and commodity brokers was also important. The lowest rated items included, the Canadian Grain Council Newsletter, USDA reports and marketing clubs (Table 10).

However, this is slightly contradictory to that determined in objective one where world supply and demand estimates were the number one item requested in an ideal set of grain market information. USDA reports, which rated very low among sources, as a single source provide data on grain supply and demand. It is possible that the multiple sources such as radio, television, newspapers and magazines provide this information as part of their package. These results than show that those sources which rated highest must package the information they obtain from single sources in a manner easily accessible and presented appropriately to the farmer.

Graph 10

INFORMATION SOURCES

Average Rating of all Respondents



Chapter 8

FUTURES MARKET INVENTORY

8.1 INTRODUCTION

The following inventory is a listing of available research, literature, and courses offered on Commodity Futures Markets in Canada. It helps to illustrate the limited availability of market information to the producer. This is an excerpt of those sources dealing with commodity futures from a more extensive project (Timko/Loyns 1988) which included the futures market application of financial and metal futures, and options as well. It was hypothesized that there was limited information and extension available on this topic. The inventory was undertaken to provide a status report on futures market information in Canada. Completed, it provides a source of contacts within the industry and university environments and a reasonably complete list of available publications as of June 1988 in the area of Commodity Futures Market. The survey was conducted by the Department of Agricultural Economics and Farm Management, University of Manitoba in cooperation with the Winnipeg Commodity Exchange. Funding was provided by the Swartz Trust Fund.

8.2 COLLECTION OF INFORMATION

The information was collected by a mail-out survey during the months of March and April, 1988 to provide an inventory of future related

activity across Canada. Questionnaires were mailed to government, university, and industry representatives requesting courses, research and literature provided by themselves or other institutions. In this way it was possible to establish a network across the country ensuring that the majority of relevant individuals and institutions were reached.

The majority of information was collected from three separate mailings to Eastern Canada, Western Canada and Manitoba. The mailing to Western Canada included Alberta, British Columbia and Saskatchewan. The mailing to Eastern Canada included Ontario and Quebec. The response rates by province are outlined in Table 6. However, not all of the responses had information to provide. The numbers reflecting a positive response are also summarized in Table 6 for each province. Considering only the Canadian sources surveyed, the listing is not exclusive.

8.3 SUMMARY OF FINDINGS

If the results of the review are representative, there appears to be a limited amount of information available on Futures Markets in Canada. However, a large portion of that which was available was in the area of commodity futures. Many of the respondents suggested contacts within the United States. Since this was not the intent of our survey, these sources are not included in this report.

The responses have been divided into 6 areas -- University Courses, College courses, Short courses and seminars, publications, papers, and miscellaneous. Considering all the responses, Ontario and Manitoba appear to be the major resource of Commodity Futures information having 77% of the total items listed (41% from Manitoba and 36% from Ontario).

TABLE 6

SUMMARY OF RESPONSES TO INVENTORY QUESTIONNAIRE

PROVINCE	NUMBER OF RESPONSES		
	Total Mailed	Total Responses	Positive Responses
British Columbia	2	2	2
Alberta	17	7	6
Saskatchewan	3	1	1
Manitoba	36	20	11
Ontario	30	19	14
Quebec	3	3	3
TOTAL	91	52	37

The total percentage of items listed for Manitoba is this high due to the large number of items listed from the Winnipeg Commodity Exchange and the contact of large investor firms through their Winnipeg Branches.

University courses

One quarter of the responses dealt with courses offered from a variety of university departments and colleges. 44% of the courses offered were in conjunction with commodity futures through Departments of Agricultural Economics. The remainder are in Economics departments.

College Courses

All of the courses listed at the College level are from colleges with diploma programs in Agriculture. As a result, they cover the topic of Agricultural or Commodity Futures.

Seminars and Short Courses

Seminars and Short courses are offered by Universities, Colleges, Government and Grain Companies. 68% of these courses were in the area of Commodity Futures.

Publications

The Publications range from magazine or newsletter articles to newsletters and manuals published by exchanges, brokerage companies and government departments. Surprisingly, response from the large investor companies was limited. Initially, information provided ranged from no response to only brief listings of publications. The companies were contacted again by telephone requesting more detail on the items provided. Commodity Information provided by government appears to be most available from Alberta Agriculture. For the other provinces, futures market information was limited to use in short courses on

marketing or in marketing clubs.

Papers

The most significant research identified in commodity futures has been done by Dr. L. Martin, University of Guelph, and by Dr. Colin Carter and Dr. R.M.A. Loyns, University of Manitoba. This research was concentrated in the areas of cattle and grains.

8.4 BENEFITS OF THE STUDY

Compiling an Inventory of Commodity Futures Market Information in Canada has a number of advantages. Firstly, it is an indication of the limited availability of market information within Canada. Secondly, it is a useful source to those involved in the area as an indicator of what information is available and where it can be found. Secondly, it identifies key individuals who are involved with commodity futures to whom others can consult when necessary establishing an information network within the industry. Thirdly, it identifies topics in futures markets which are presently relevant along with those topics which have not been considered in the past. Finally, the study emphasizes the limited scope of Canadian Futures Markets relative to USA Futures Markets and the need to develop Canadian studies for unique Canadian circumstances.

Chapter IX

CONCLUSIONS AND RECOMMENDATIONS

9.1 CONCLUSIONS

Findings in recent years have indicated much irrelevancy in market information due to analysis on a macroeconomic rather than a microeconomic level. The suitability of information influences the effectiveness of decisions made based on that information. Academic literature in this area is scarce because of a lack of understanding of marketing's role which did not allow the economist to consider marketing information needs of the individual producer. With marketing viewed as part of Farm Management it can possess microeconomic characteristics along with the more traditional macroeconomic characteristics.

This research is an attempt to begin to fill the literature gap in the area of market information by determining a need for more appropriate market information for farm management decision making. An essential element of the hypotheses and analysis was that macro and microeconomic information could be clearly separated and are separated in the minds of the decision makers. Using this definition, the specific objectives of the study were to determine a priority, availability, and additional need, for either type of information.

The objectives were completed by providing a conception of information needs supported by the collection of primary data. A

theoretical framework was developed by defining where information belongs in the farm management decision making process and by conceptualizing a taxonomy for information based on a thorough literature review and decision and information economic theory. The empirical results to support the information needs derived for the farm management decision making process were obtained from a mail and telephone survey to grain producers in Manitoba. The producers rated a listing of 12 microeconomic and 12 macroeconomic information items on a scale of 1 to 5 to determine the importance, availability, and additional need for each item.

An assessment of information needs is essential for developing a basis from which to effectively evaluate market information systems and data in the future. The results of this study should be valuable to the supplier of information by defining the source and form of information desirable to their clientele. Also, with improved information, better marketing decisions can be made by the producer. Hayward (1985) states, "timely and appropriately focused market outlook is the food for market decisions."

To conclude, assuming that farm management decision making requires both microeconomic and macroeconomic orientated information, farm management decision making requires both types of information. The degree of importance of either will depend upon the market in which the producer operates. For instance, within groups the Canola Growers favored microeconomic information, while the Dauphin Crops Club favored macroeconomic information. When tested between groups, the Canola Growers considered microeconomic information significantly more important. Secondly, both microeconomic and macroeconomic information

is perceived as available for decision making by the producer. On average, all items rated over 2.4 out of 5 and there was no significant difference within or between groups regarding the availability of each type of information. Availability is not an issue, but some producers commented that accessibility and convenience of the information may be important. Thirdly, there is a need for more information. However, again, whether microeconomic or macroeconomic information is required depends upon the producer's market. The Wheat Growers perceived a need for more macroeconomic information. The Canola Growers perceived a need for more microeconomic information in comparison to the other groups.

9.2 LIMITATIONS OF THE STUDY

The limitations to the study are of minimal significance. They include precisions in the defining of terms and the representation of those surveyed.

Firstly, the items listed may have been interpreted differently than intended due to difficulties in defining macroeconomic and microeconomic information. As described in the Analytical Approach (Section 6.1), those items defined as macroeconomic information were often interpreted as microeconomic information by graduate students. This does not mean that the definitions are inappropriate, but only emphasizes that the distinction between the two is not always distinct.

Secondly, when asked to rate the need for more information, there was no specific indication as to the definition of more. If interpreted as meaning additional volume, it is possible that the ratings could have been very low. However, other studies showed that 'more' indicated a

need for more accuracy, timeliness, and other characteristics of information. There is no method of determining which idea the respondent used in answering the question. However, it is an indication that the respondent's needs are not being met. This is considered under suggestions for future research.

Thirdly, the low measures for the value of information could be due to the terminology of pay versus value. This is discussed in section 7.2.2. Respondents may not be willing to pay for a package of information which they perceive is freely available. However, assuming that one would only pay for an input which would derive more benefits than its cost, measuring the amount one is willing to pay is an indication of the perceived returns from that information.

Fourthly, the sample is not representative of farmers within Manitoba. The farmers who answered the questionnaire appeared to be above average farmers. It was intended that select groups of farmers be chosen, hopefully to isolate those who are very aware of market information and have some understanding of a variety of information sources available.

Fifthly, though the majority of wheat producers sold crops on-board, they also had grown other crops within the last three years. It was assumed that the wheat producers sold mainly on-board crops, while Canola Growers were more involved in specialty and off-board crops. This is true from the demographics collected, but exceptions existed in each group. However, if the surveys which were the exception were removed

from each group, it is unlikely that the results would change significantly.

9.3 IMPLICATIONS

The contributions of this study exceed the limitations above. Firstly, past literature based on primary data regarding marketing information needs and sources for individual producers is nearly non-existent. This study incorporates a new disciplinary approach to marketing which emphasizes the assessment of market information for the individual producer as fundamental. The literature review indicates a concern for the irrelevancy or inappropriateness of market information for decision making which is developed into a conceptual framework that helps define information needs for the farmer. The empirical results support the hypotheses of that framework.

Secondly, the taxonomy of market information, microeconomic vs macroeconomic provides a basis from which to evaluate existing market information and data. Much information is provided, but not all is used by producers. Improving the suitability of the information provided should improve a farmer's ability to make decisions which are beneficial and profitable to his enterprise. This thesis emphasizes the importance of appropriate market information and provides a classification of information which could be used to evaluate whether information provided is suitable to a given set of users.

Thirdly, this study provides a basis from which suppliers of information can choose and market that which is relevant to the producer. Some information which is presently provided may not be used by producers

because it is not in an appropriate form for their decision making process. Knowing that different producer groups perceived a need for different information, may help those who supply the information to be more aware of their clientele's needs and that one set of information may not be appropriate for all producers.

9.4 SUGGESTIONS FOR FURTHER RESEARCH

There are several important areas in which the findings of this thesis could be extended. The first refers to the need for more information. The conclusions of this thesis suggest that there is a need for more information, but whether this information is microeconomic or macroeconomic is dependent upon the group of producers. It would be appropriate to study what is considered under the terminology of 'more'. If it is strictly the volume of information, other papers (Ackoff 1967, Blackburn 1986) suggest more information is not needed. It is possible that producers define 'more' based on regularity of publication, the accuracy of the information or the timeliness of the information. These characteristics could be assessed for microeconomic and macroeconomic items to determine whether 'more information' has the same requirements for both types of information. While this problem is outside the scope of this thesis, it is important and should be included in a study which specifically sets out to discover what exactly farmer's want from 'more' information.

Secondly, the specifics of availability should be investigated. That is, from which sources do farmers get particular items or types of information. Again, this could be done for each item, or as a comparison

between micro and macroeconomic information. For example, do those items classified as microeconomic come from the same source or a different source than those classified as macroeconomic. In addition, is information not available to a producer because he is looking for that information in the wrong source.

Thirdly, more research is needed on the value of information. It may be interesting to determine an ordinal ranking on the items which are considered important to determine what information an individual would be willing to forego in order to obtain another item. This may be incorporated with determining a value for information by asking a producer which information she/he would purchase given a set number of dollars. By reducing the allowance of funds, the producer would have to choose to eliminate some items. Eventually, she/he would retain that which was the most important to her/him. Producers had a tendency to value information, even that considered "ideal", very low. Determining all the information sources used by a producer and the amount spent on these sources could help determine whether the perception of the value of information and the actual dollars spent are different.

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APPENDIX A
FARM SURVEY

FARM SURVEY

This survey is part of a research project on Grain Market Information at the University of Manitoba. Approximately 100 farmers across Manitoba will be surveyed. The survey will deal with what market information is used in decision making, what information is available and how applicable that information is. The results will be completed by September 1988.

Please keep in mind while answering the survey that we are interested in Grain Market Information.

A. List five items that you would include in an "ideal" set of grain marketing information. BE VERY SPECIFIC.

1. _____

2. _____

3. _____

4. _____

5. _____

6. How much would you be willing to pay for the above set if it were available?

_____(per year)

B. We would like to know what information you consider important in making a marketing decision. Please rate the following on a scale of 1 to 5 with ONE being not important, and FIVE being very important to your decision.

	not important . .				very important
1. Federal regulations on grain.	1	2	3	4	5
2. Selling options available to you	1	2	3	4	5
3. Provincial regulations related to grain	1	2	3	4	5
4. Terms and conditions of sale	1	2	3	4	5
5. Federal policy and program changes	1	2	3	4	5
6. Individual eligibility requirements for government programs.	1	2	3	4	5
7. World grain supply and demand estimates	1	2	3	4	5
8. Local crop production averages	1	2	3	4	5
9. Canadian Wheat Board quotas	1	2	3	4	5
10. Local grain supply and demand estimates	1	2	3	4	5
11. Input price trends and patterns	1	2	3	4	5
12. Comparative distributor input prices	1	2	3	4	5
13. Canadian Wheat Board Initial Prices	1	2	3	4	5
14. Comparative elevator street prices	1	2	3	4	5
15. Canadian Grain Commission handling and storage tariffs	1	2	3	4	5
16. Elevator handling and storage charges	1	2	3	4	5
17. Grain price forecasts	1	2	3	4	5
18. Estimates of Canadian Wheat Board final payment	1	2	3	4	5
19. Historical Price trends and patterns	1	2	3	4	5
20. Transportation charges to your delivery point	1	2	3	4	5
21. General economic conditions	1	2	3	4	5
22. Your farm financial position	1	2	3	4	5
23. Canadian interest rates	1	2	3	4	5
24. Your private loan rates	1	2	3	4	5

C. There are two parts to this question. On the left hand side we would like to know how available information is to you when you need it. On the right hand side we would like to know which information you would like to have more of. Please rate the following on a scale of 1 to 5.

INFORMATION AVAILABLE (not available. . . . readily available)						ADDITIONAL INFORMATION DESIRED (do not Need . . . . . need much more)				
1	2	3	4	5	Federal regulations on grain.	1	2	3	4	5
1	2	3	4	5	Selling options available to you	1	2	3	4	5
1	2	3	4	5	Provincial regulations related to grain	1	2	3	4	5
1	2	3	4	5	Terms and conditions of sale	1	2	3	4	5
1	2	3	4	5	Federal policy and program changes	1	2	3	4	5
1	2	3	4	5	Individual eligibility requirements for government programs.	1	2	3	4	5
1	2	3	4	5	World grain supply and demand estimates	1	2	3	4	5
1	2	3	4	5	Local crop production averages	1	2	3	4	5
1	2	3	4	5	Canadian Wheat Board quotas	1	2	3	4	5
1	2	3	4	5	Local grain supply and demand estimates	1	2	3	4	5
1	2	3	4	5	Input price trends and patterns	1	2	3	4	5
1	2	3	4	5	Comparative distributor input prices	1	2	3	4	5
1	2	3	4	5	Canadian Wheat Board Initial Prices	1	2	3	4	5
1	2	3	4	5	Comparative elevator street prices	1	2	3	4	5
1	2	3	4	5	Canadian Grain Commission handling and storage tariffs	1	2	3	4	5
1	2	3	4	5	Elevator handling and storage charges	1	2	3	4	5
1	2	3	4	5	Grain price forecasts	1	2	3	4	5
1	2	3	4	5	Estimates of Canadian Wheat Board final payments	1	2	3	4	5
1	2	3	4	5	Historical Price trends and patterns	1	2	3	4	5
1	2	3	4	5	Transportation charges to your delivery point	1	2	3	4	5
1	2	3	4	5	General economic conditions	1	2	3	4	5
1	2	3	4	5	Your farm financial position	1	2	3	4	5
1	2	3	4	5	Canadian interest rates	1	2	3	4	5
1	2	3	4	5	Your private loan rates	1	2	3	4	5

D. What are your grain market information sources and how often do you use them? Rank each category below on a scale of 1 to 5 with ONE being never used and FIVE being used daily.

	Never Used	Seldom Used	Used Monthly	Used Weekly	Used Daily
Canadian Wheat Board Newsletters and Update	1	2	3	4	5
Provincial Weekly Market Reports	1	2	3	4	5
Winnipeg Commodity Exchange- weekly report	1	2	3	4	5
Weekly Farm Newspapers	1	2	3	4	5
Canadian Grain Commission Weekly Reports	1	2	3	4	5
Canadian Grain Council Newsletter	1	2	3	4	5
United States Department of Agriculture Reports	1	2	3	4	5
Provincial Market Outlook Newsletters	1	2	3	4	5
Farm Magazines (ex: Country Guide, Furrow)	1	2	3	4	5
Banks - monthly reviews	1	2	3	4	5
Elevator Company Market Updates	1	2	3	4	5
Producer Association Newsletters	1	2	3	4	5
Statistics Canada - monthly review	1	2	3	4	5
Federal Government Market reports	1	2	3	4	5
Farm Supply Company bulletins	1	2	3	4	5
Radio	1	2	3	4	5
Television	1	2	3	4	5
Daily Newspapers	1	2	3	4	5
Extension Agents and services	1	2	3	4	5
Elevator Agents	1	2	3	4	5
Agricultural University Personnel	1	2	3	4	5
Commodity Brokerage Firms	1	2	3	4	5
Marketing Clubs	1	2	3	4	5
Other Farmers	1	2	3	4	5
Telidon - Grassroots	1	2	3	4	5
Federal Outlook Conference	1	2	3	4	5
Provincial Outlook Conference	1	2	3	4	5
Other_____	1	2	3	4	5

E. Finally, We would like to ask you some questions about yourself and your farm. We assure you that this information will be used for no other reason than to aid in statistical analysis.

1. Your age:

____a. under 25
____b. 25 - 39
____c. 40 - 54
____d. 55 - 69
____e. 70 or over

2. Your highest education level:

____ a. Primary school (enter grade) ____
____ b. High school (enter grade) ____
____ c. Some Community College
____ d. Some University
____ e. Community College Graduate
____ f. University Graduate
____ g. Post Graduate

3. Do you farm on a full time or part time basis?

____ a. full time
____ b. part time

4. Which of the following types of crops have you grown in the last three years? Check those which you have grown.

Board Crops	Off-Board Crops	Specialty Crops
____ a. wheat	____ d. wheat	____ j. corn
____ b. oats	____ e. oats	____ k. sugar beets
____ c. barley	____ f. barley	____ l. mustard
	____ g. rye	____ m. peas/beans
	____ h. canola	____ n. lentils
	____ i. flaxseed	____ o. sunflowers
		____ p. canary seed
		____ q. forage and grass seed
		____ r. other (please specify) _____

5. In the last three years has your farm included any commercial livestock or poultry enterprises?

Yes _____ No ____

6. What were your average annual gross revenues in the last three years?

____ a. under 100,000
____ b. 100,000 - 250,000
____ c. over 250,000

7. What is your average outstanding debt in the last three years?

____ a. under 25,000
____ b. 25,000 - 100,000
____ c. over 100,000

8. What is the current acreage of your farm?

____ a. under 640 acres
____ b. 640 - 1500 acres
____ c. over 1500 acres

9. Do you usually forward sell some of your crops? YES____ NO____

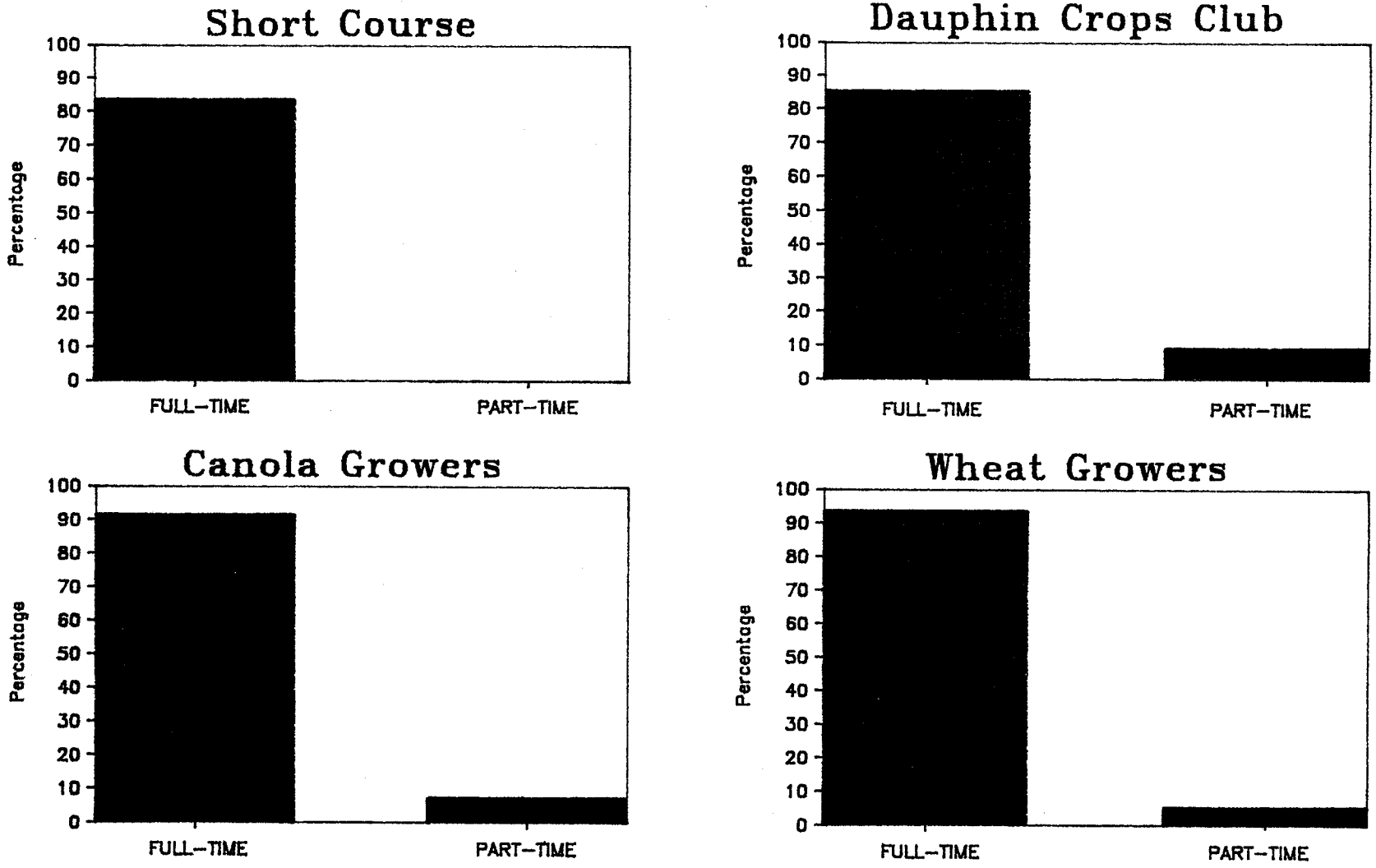
10. Do you usually use hedging as a marketing tool? YES____ NO____

THANK YOU FOR YOUR ASSISTANCE!

APPENDIX B
SURVEY RESULTS

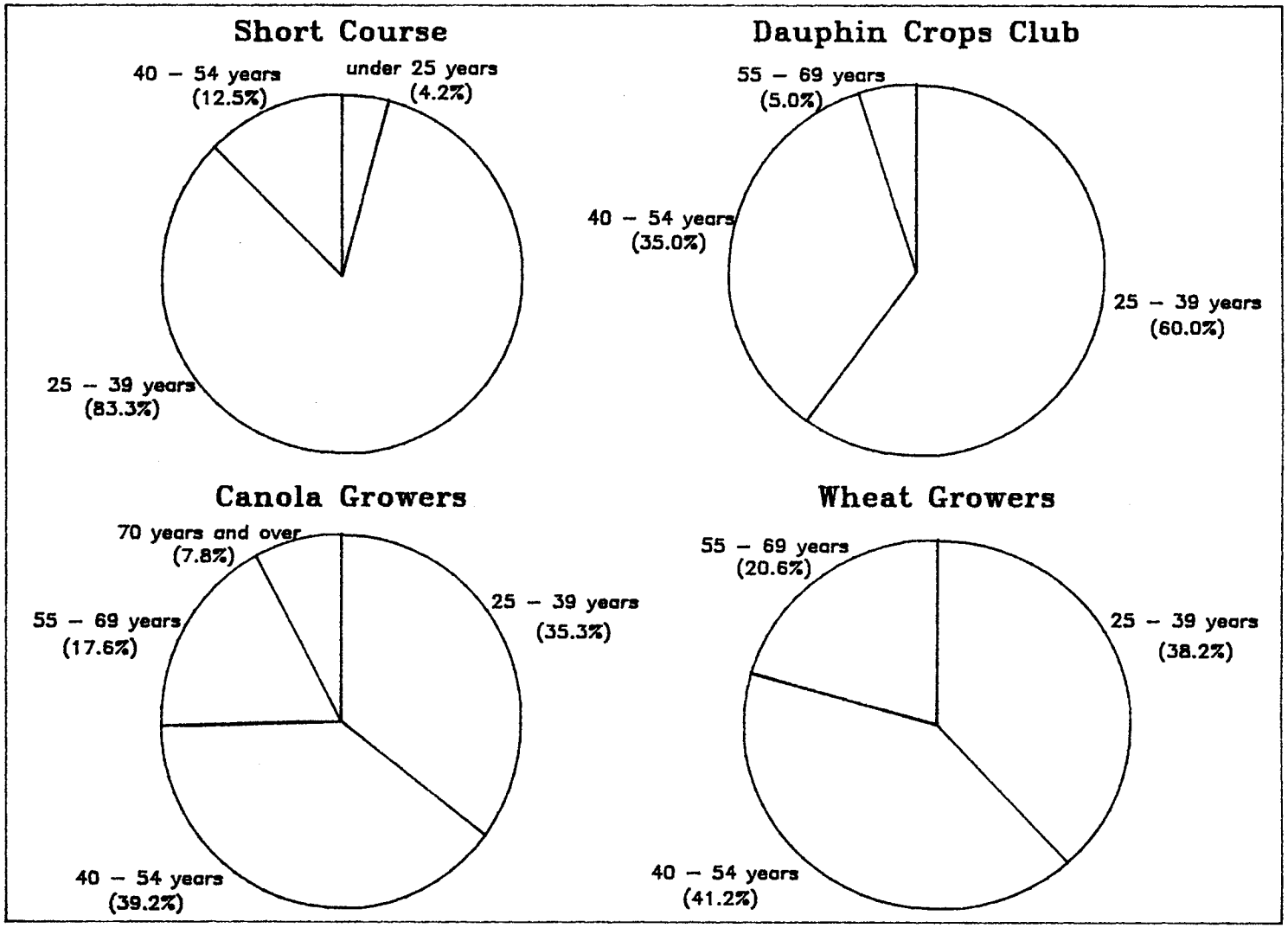
GRAPH 11

FULL OR PART–TIME FARMERS



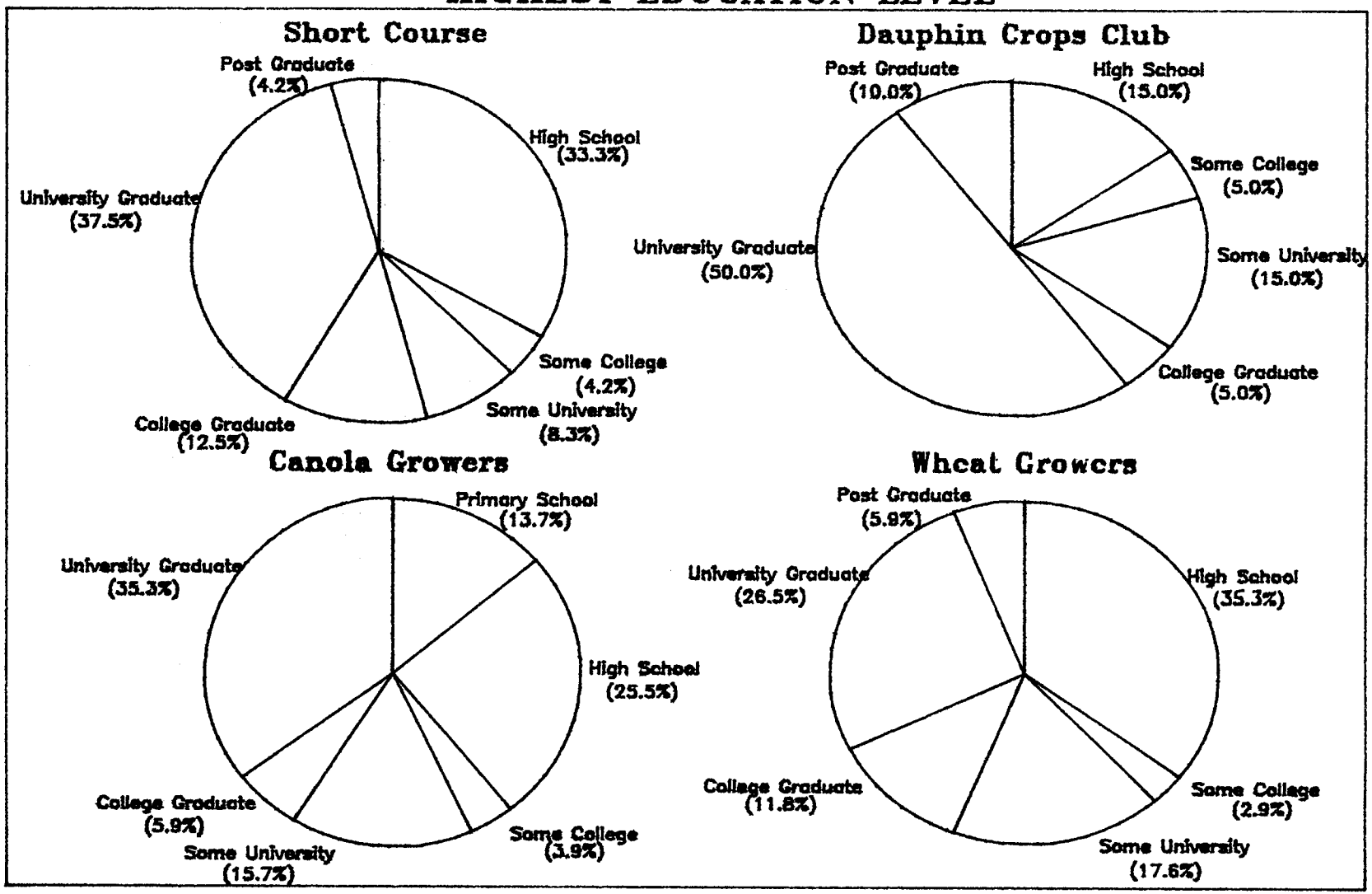
GRAPH 12

FARMER'S AGE



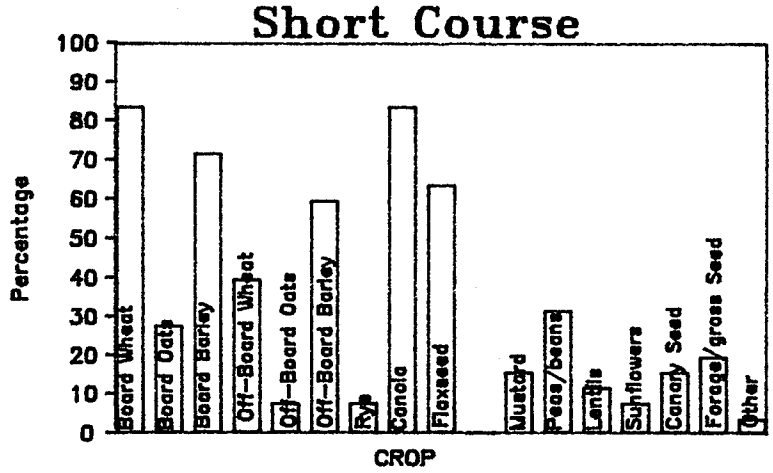
GRAPH 13

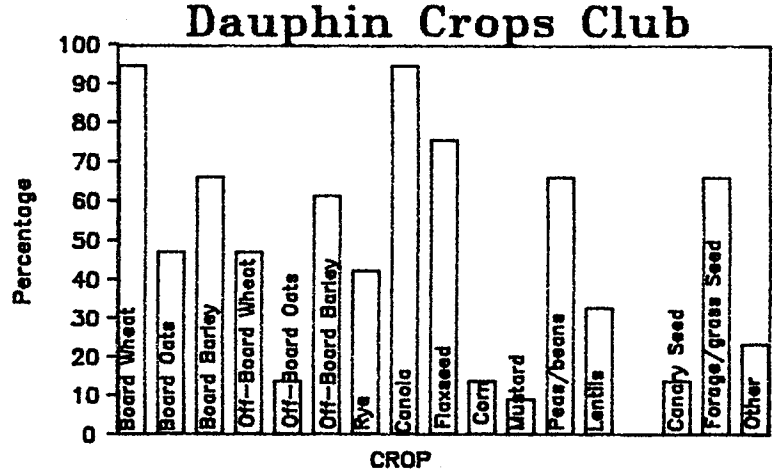
HIGHEST EDUCATION LEVEL

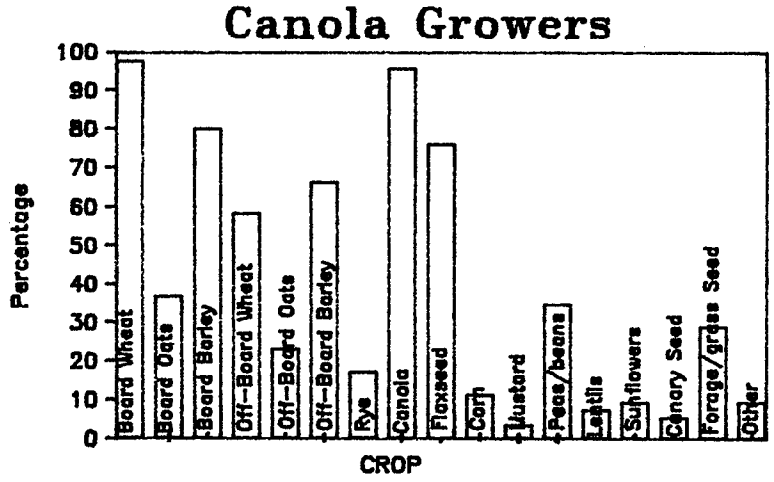


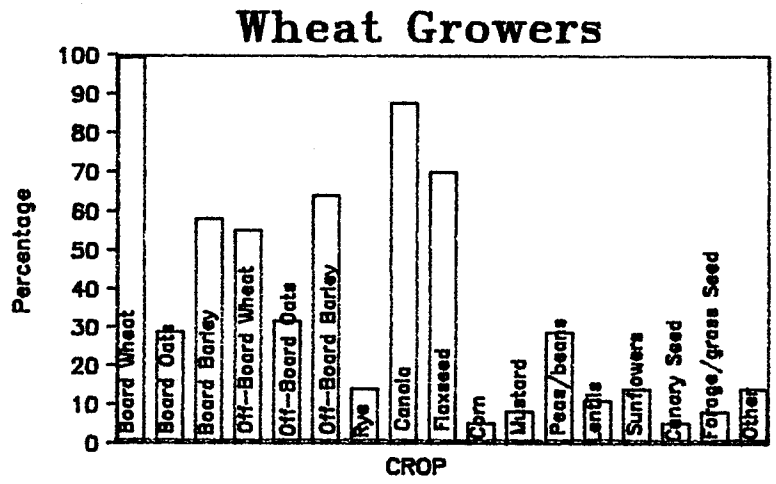
GRAPH 14

CROPS GROWN



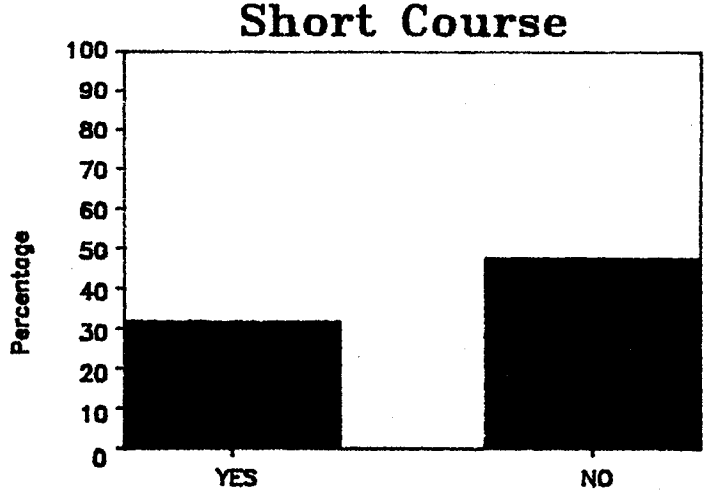


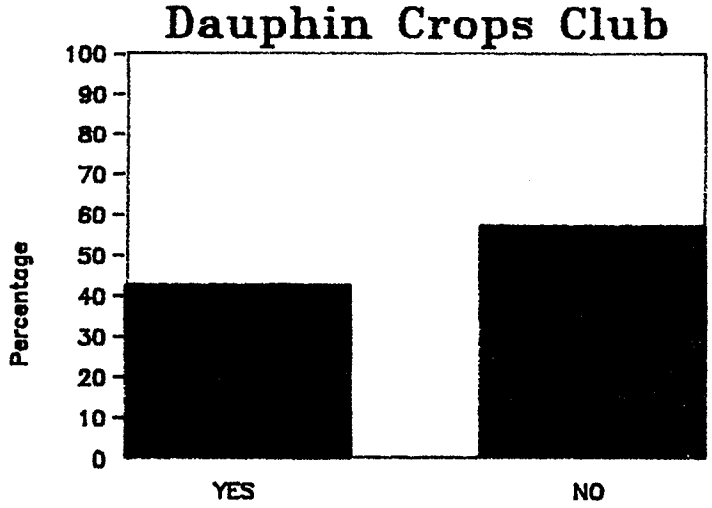


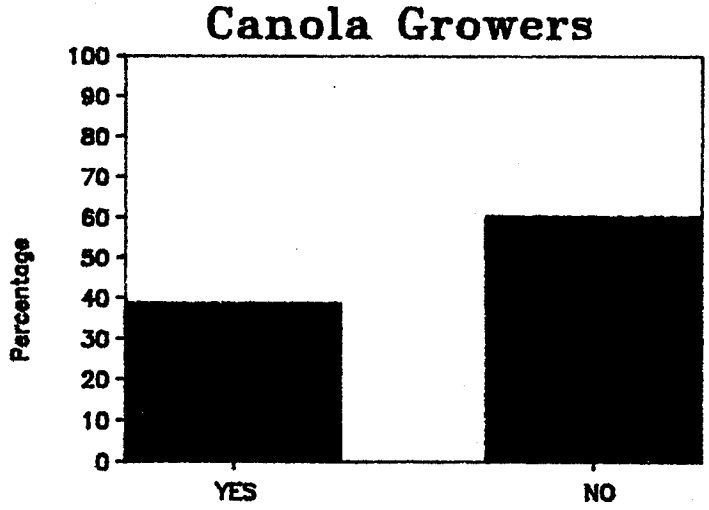


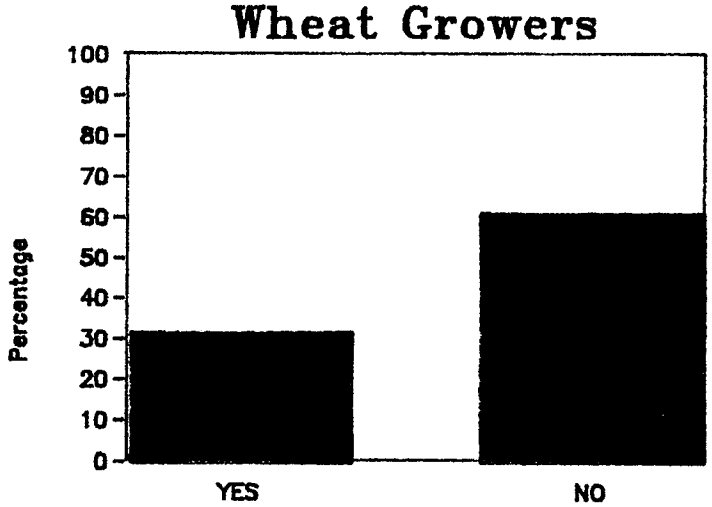
GRAPH 15

LIVESTOCK OPERATIONS



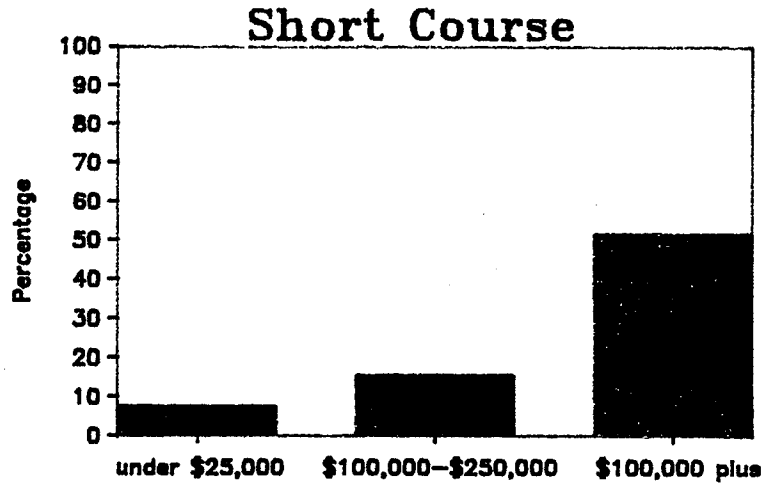


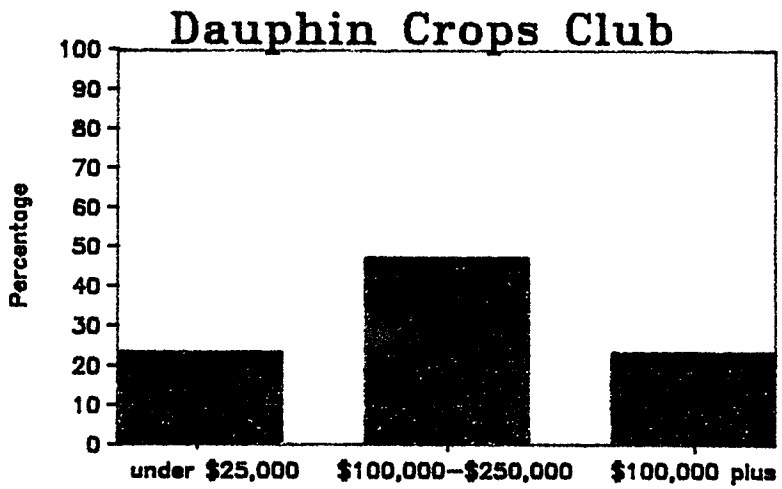


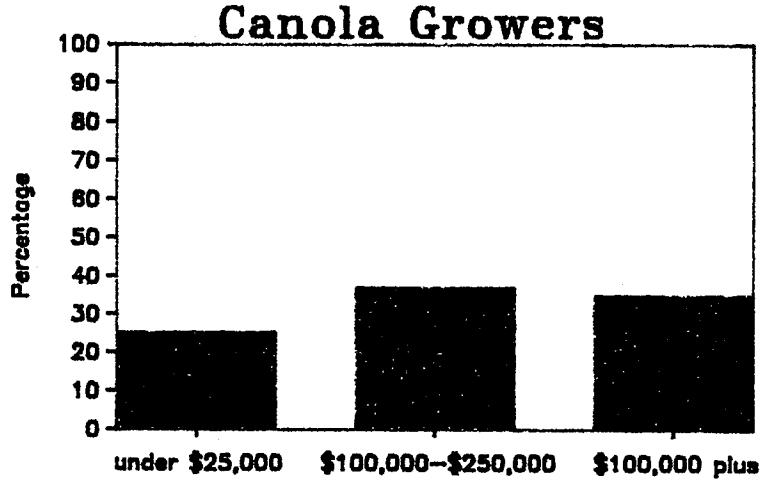


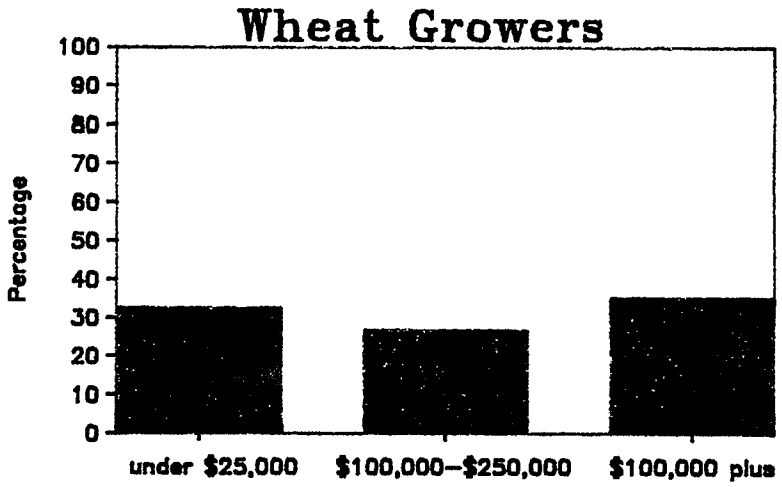
GRAPH 16

FARM DEBT LEVEL



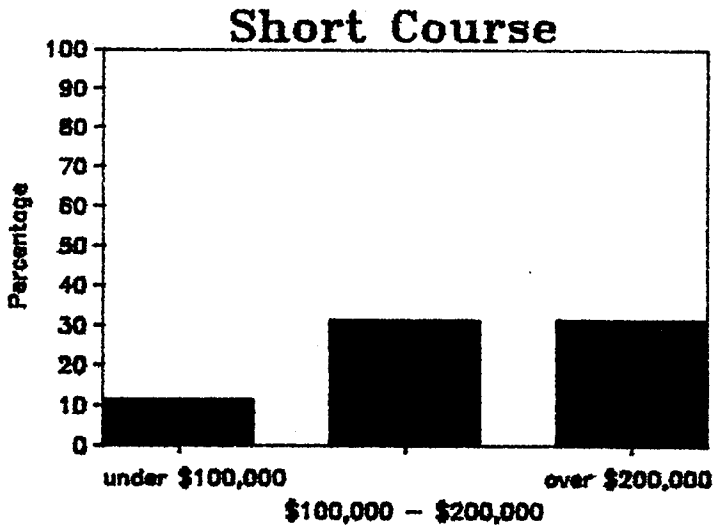


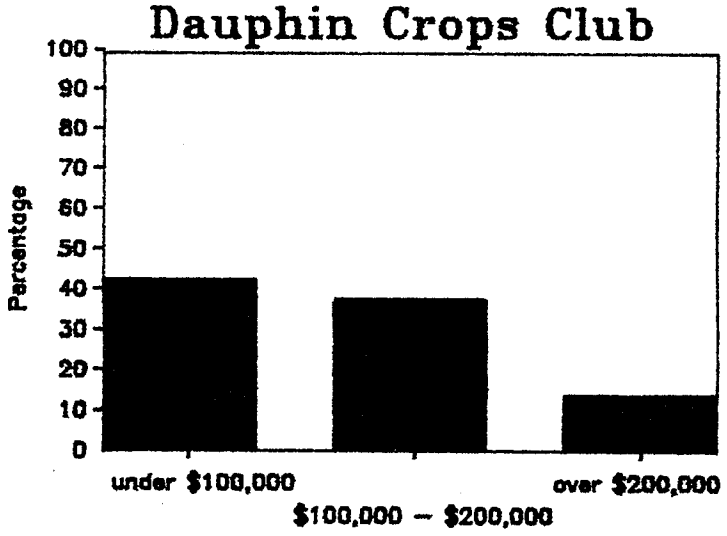


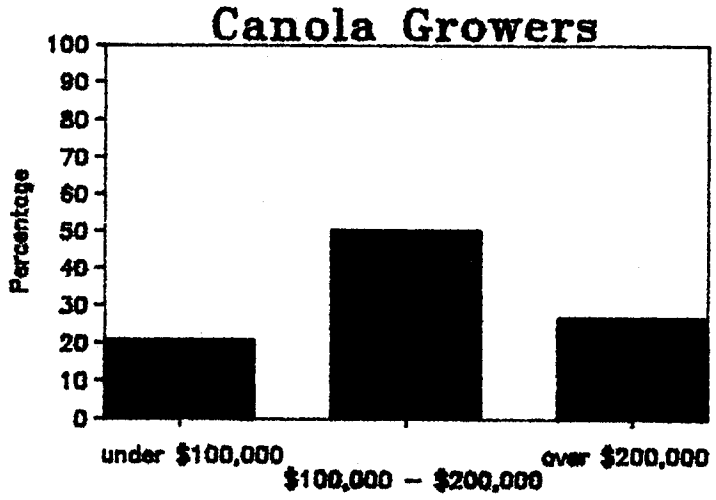


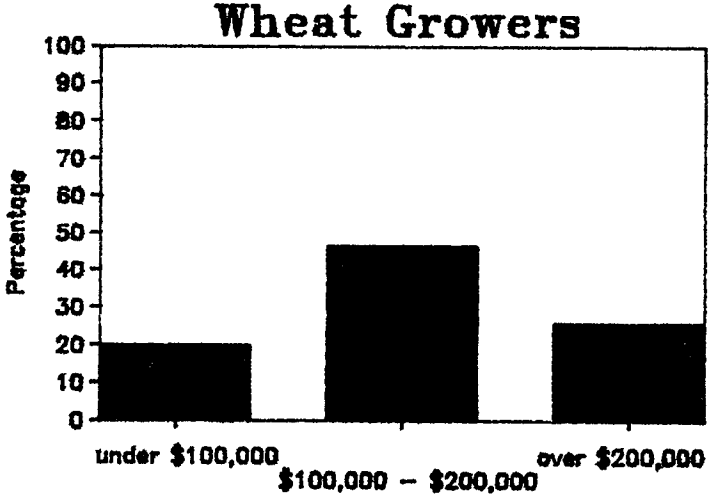
GRAPH 17

REVENUE LEVEL



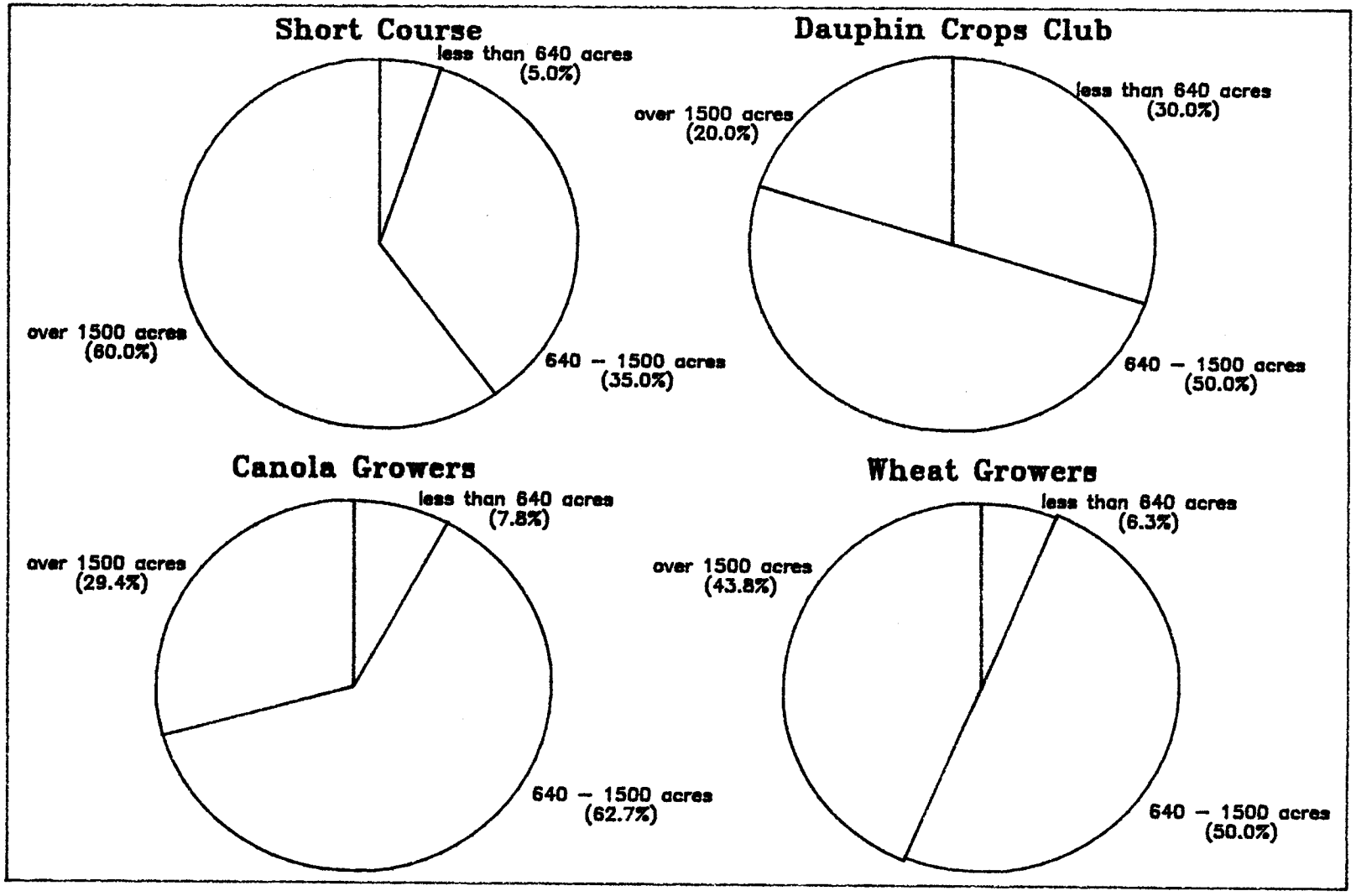






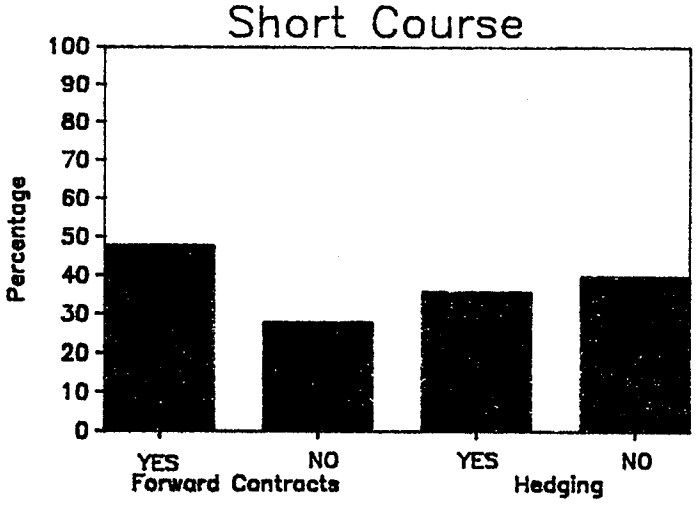
GRAPH 18

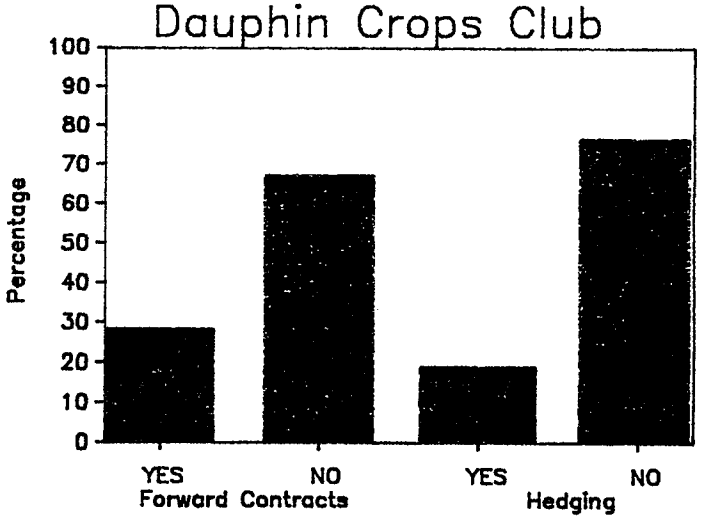
Farm Size

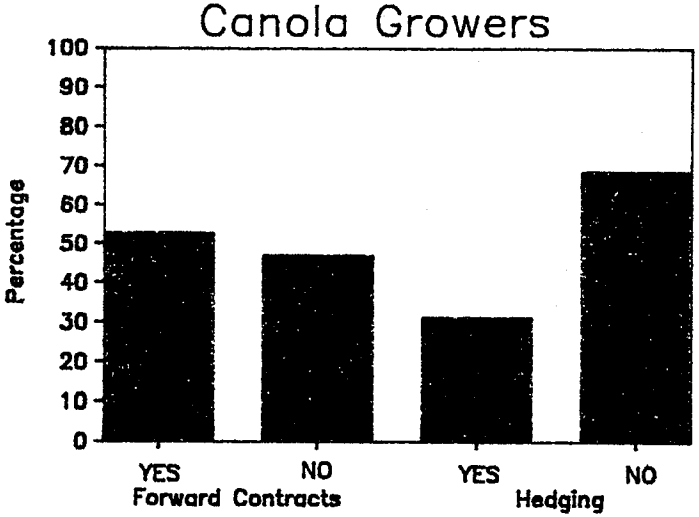


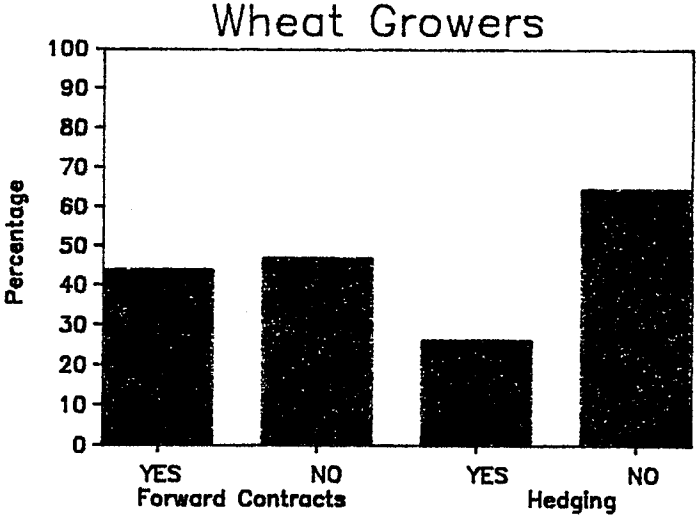
GRAPH 19

FORWARD CONTRACTING AND HEDGING









Graph 20

INFORMATION SOURCES

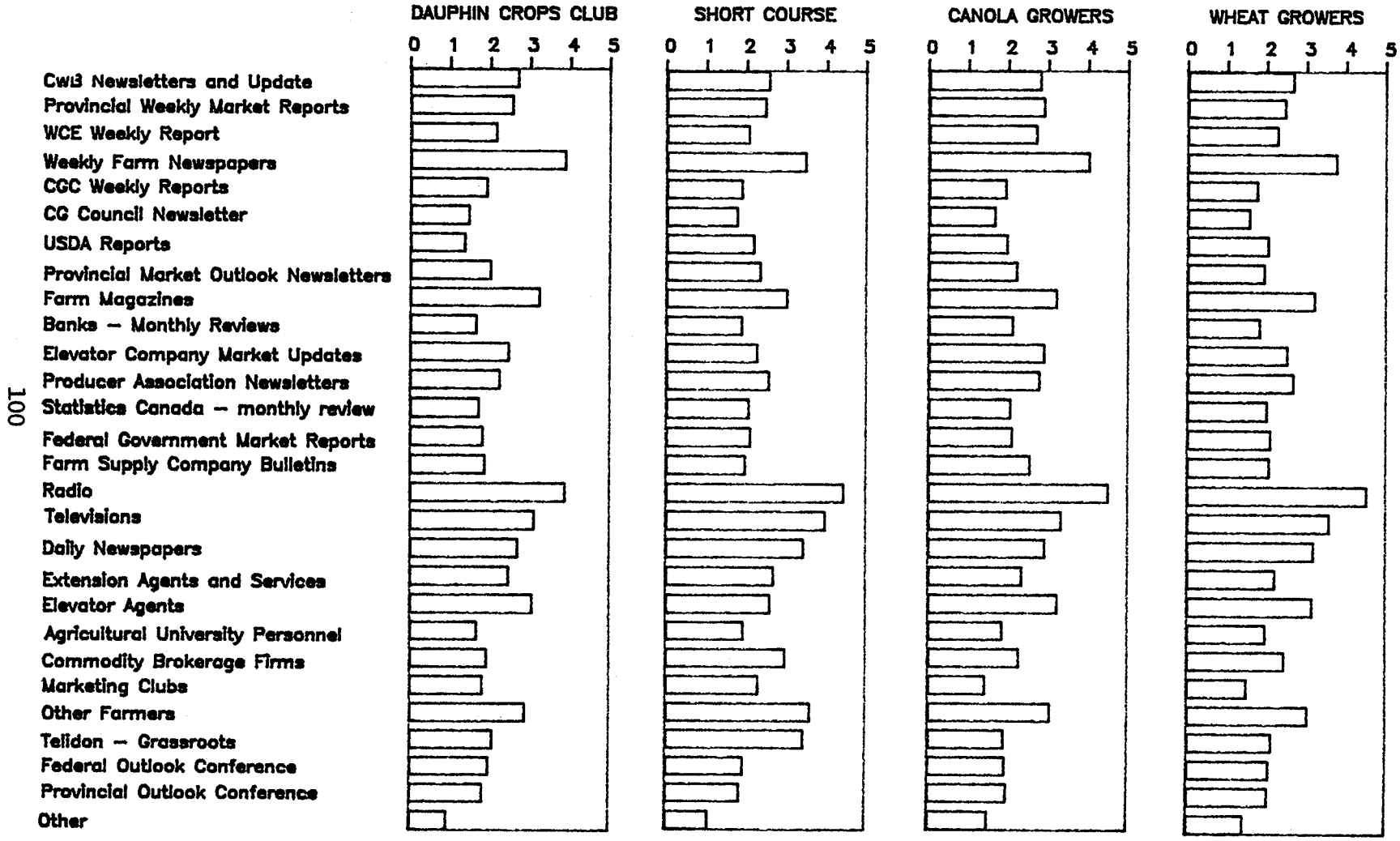


TABLE 7

TEST VALUES FOR CHI-SQUARE TEST OF INDEPENDENCE

($\alpha = .10$)

	FORWARD CONTRACTING			HEDGING		
	yes	no	TOTALS	yes	no	TOTALS
VALUE OF INFORMATION						
LESS THAN $100	8	14	22	1	18	19
$100 – $499	25	20	45	14	26	40
$500 – $999	8	4	12	5	7	12
$1000 AND MORE	6	1	7	6	1	7
TOTALS	47	39	86	26	52	78
	$X^2 = 6.41$ (not significant)			$X^2 = 15.80$ (not significant)		
IMPORTANCE OF INFORMATION						
MICROECONOMIC	30	30	60	21	39	60
MACROECONOMIC	22	23	45	14	31	45
TOTALS	52	53	105	35	70	105
	$X^2 = 0.01$ (not significant)			$X^2 = 0.18$ (not significant)		
NEED FOR MORE INFORMATION						
MICROECONOMIC	28	25	53	19	36	55
MACROECONOMIC	25	26	51	14	37	51
TOTALS	53	51	104	33	73	106
	$X^2 = 0.15$ (not significant)			$X^2 = 0.62$ (not significant)		

TABLE 8

IMPORTANCE OF INFORMATION – AVERAGE RATING BY GROUP

Responses for Question B

ITEM	AVERAGE RATING BY GROUP				
	Short Course	Dauphin Crops Club	Canola Growers	WHEAT Growers	TOTALS
1 Federal regulations on grain	3.25	3.86	3.44	3.94	3.60
2 Selling options available to you	4.75	4.00	4.51	4.59	4.46
3 Provincial regulation related to grain	2.83	2.82	2.72	2.52	2.72
4 Terms and Conditions of Sale	4.63	4.00	4.20	4.21	4.26
5 Federal policy and program changes	4.13	4.18	3.98	4.29	4.15
6 Individual eligibility require-ments for government programs	4.00	4.20	4.10	3.88	4.05
7 World grain supply and demand estimates	4.46	4.05	4.08	4.35	4.23
8 Local crop production averages	3.13	3.05	3.06	3.06	3.07
9 Canadian Wheat Board quotas	4.08	3.86	4.25	4.24	4.11
10 Local grain supply and demand estimates	3.21	2.95	3.26	3.38	3.20
11 Input price trends and patterns	3.58	3.68	3.88	3.76	3.73
12 Comparative distributor input prices	3.00	3.28	3.65	3.39	3.32
13 Canadian Wheat Board initial prices	4.00	4.14	4.26	4.24	4.16
14 Comparative elevator street prices	3.88	3.85	4.36	3.91	3.99
15 Canadian Grain Commission handling and storage tariffs	3.46	2.95	3.38	3.74	3.38
16 Elevator handling and storage charges	3.79	3.14	3.80	3.91	3.61
17 Grain price forecasts	4.42	4.14	4.36	4.44	4.34
18 Estimates of the Canadian Wheat Board final payment	3.88	3.91	4.22	4.03	4.01
19 Historical price trends and patterns	4.08	3.68	3.56	3.47	3.70
20 Transportation charges to your delivery point	3.83	3.45	3.50	3.71	3.62
21 General Economic conditions	3.75	3.95	3.48	3.74	3.73
22 Your farm financial position	4.46	4.09	4.40	4.15	4.27
23 Canadian interest rates	3.83	3.18	3.74	3.79	3.64
24 Your private loan rates	3.67	3.38	3.78	3.91	3.68
AVERAGE OF MICROECONOMIC ITEMS	3.85	3.61	3.89	3.84	3.80
AVERAGE OF MACROECONOMIC ITEMS	3.82	3.71	3.76	3.88	3.79
AVERAGE OF ALL ITEMS	3.84	3.66	3.82	3.86	3.79

TABLE 9

AVAILABILITY OF INFORMATION – AVERAGE RATING BY GROUP

Responses for Question C – Part 1

ITEM	AVERAGE RATING BY GROUP				
	Short Course	Dauphin Crops Club	Canola Growers	WHEAT Growers	TOTALS
1 Federal regulations on grain	3.33	2.73	3.20	3.03	3.07
2 Selling options available to you	3.67	2.95	3.50	3.70	3.45
3 Provincial regulation related to grain	3.04	2.20	2.73	2.45	2.61
4 Terms and Conditions of Sale	3.45	2.77	3.60	3.85	3.42
5 Federal policy and program changes	2.96	2.80	3.04	3.53	3.08
6 Individual eligibility requirements for government programs	3.21	2.90	3.22	3.48	3.20
7 World grain supply and demand estimates	3.21	2.91	3.20	3.52	3.21
8 Local crop production averages	2.92	2.91	2.96	3.13	2.98
9 Canadian Wheat Board quotas	4.21	3.73	4.42	4.17	4.13
10 Local grain supply and demand estimates	2.79	2.41	2.68	2.72	2.65
11 Input price trends and patterns	2.58	2.32	2.92	3.15	2.74
12 Comparative distributor input prices	2.46	2.18	2.65	2.87	2.54
13 Canadian Wheat Board initial prices	3.79	3.09	4.26	4.32	3.87
14 Comparative elevator street prices	3.58	3.05	3.66	4.03	3.58
15 Canadian Grain Commission handling and storage tariffs	3.00	2.77	3.20	3.33	3.08
16 Elevator handling and storage charges	2.79	2.95	3.32	3.35	3.10
17 Grain price forecasts	3.00	2.80	3.12	3.47	3.10
18 Estimates of the Canadian Wheat Board final payment	2.13	2.41	2.32	2.73	2.40
19 Historical price trends and patterns	2.29	2.64	2.62	2.88	2.60
20 Transportation charges to your delivery point	3.13	3.14	3.32	3.39	3.24
21 General Economic conditions	3.21	3.09	3.38	3.38	3.26
22 Your farm financial position	4.17	3.91	4.16	4.39	4.16
23 Canadian interest rates	4.04	3.50	3.88	4.09	3.88
24 Your private loan rates	4.42	3.88	4.33	4.17	4.15
AVERAGE OF MICROECONOMIC ITEMS	3.23	2.94	3.31	3.48	3.24
AVERAGE OF MACROECONOMIC ITEMS	3.22	2.88	3.33	3.44	3.22
AVERAGE OF ALL ITEMS	3.22	2.91	3.32	3.46	3.23

TABLE 10

NEED FOR MORE INFORMATION – AVERAGE RATING BY GROUP

Responses for Question C – Part 2

ITEM	AVERAGE RATING BY GROUP				
	Short Course	Dauphin Crops Club	Canola Growers	WHEAT Growers	TOTALS
1 Federal regulations on grain	3.21	3.00	2.78	3.44	3.11
2 Selling options available to you	4.00	4.20	3.94	4.03	4.04
3 Provincial regulation related to grain	3.17	3.32	2.82	3.33	3.16
4 Terms and Conditions of Sale	3.50	3.75	3.00	3.19	3.38
5 Federal policy and program changes	3.88	4.45	3.52	3.81	3.91
6 Individual eligibility requirements for government programs	3.79	3.86	3.67	3.59	3.73
7 World grain supply and demand estimates	3.87	3.55	4.00	4.06	3.83
8 Local crop production averages	2.96	3.11	3.08	2.91	3.01
9 Canadian Wheat Board quotas	3.17	3.30	2.71	3.06	3.06
10 Local grain supply and demand estimates	3.54	3.35	3.30	3.21	3.35
11 Input price trends and patterns	3.48	3.95	3.63	3.97	3.80
12 Comparative distributor input prices	3.33	3.45	3.73	3.74	3.56
13 Canadian Wheat Board initial prices	4.09	3.86	2.70	2.91	3.35
14 Comparative elevator street prices	3.33	3.68	3.62	3.23	3.47
15 Canadian Grain Commission handling and storage tariffs	3.25	3.55	3.08	3.44	3.33
16 Elevator handling and storage charges	3.50	3.50	3.16	3.28	3.36
17 Grain price forecasts	4.04	4.09	4.22	3.88	4.10
18 Estimates of the Canadian Wheat Board final payment	4.60	4.45	4.44	4.12	4.45
19 Historical price trends and patterns	4.32	3.70	3.68	3.36	3.81
20 Transportation charges to your delivery point	3.33	3.05	2.88	3.31	3.14
21 General Economic conditions	3.63	3.60	3.46	3.81	3.62
22 Your farm financial position	2.83	3.45	2.96	2.94	3.05
23 Canadian interest rates	2.92	3.15	2.98	2.91	2.99
24 Your private loan rates	2.63	3.00	2.71	4.19	4.19
AVERAGE OF MICROECONOMIC ITEMS	3.45	3.57	3.37	3.48	3.56
AVERAGE OF MACROECONOMIC ITEMS	3.59	3.63	3.30	3.50	3.51
AVERAGE OF ALL ITEMS	3.52	3.60	3.34	3.49	3.53

APPENDIX C
FUTURES MARKET INVENTORY

FUTURES MARKET INVENTORY

UNIVERSITY COURSES

Organization: University of Alberta, Dept. of Rural Economy

AGRICULTURAL ECONOMICS 384
Frequency Offered: annual
Attendance: 60
Brief Description: An introduction to commodity futures and hedging is included as part of an introductory agricultural marketing course.
Contact Person: M.H. Hawkins
Phone: 403-432-4562

AGRICULTURAL COMMODITY FUTURES MARKETS, AGRI. ECON. 487
Frequency Offered: every second year
Attendance: 28 (taught first time in 1988)
Brief Description: Price determination, futures prices, hedging strategies, and price behaviour over time, with respect to agricultural commodities
Contact Person: J.H. Copeland
Phone: 403-432-3715

Organization: University of Guelph, Dept. of Agri. Economics

UNIVERSITY COURSE
Frequency Offered: yearly
Attendance: 75-100
Brief Description: Introduces futures (in a market analysis course) and students speculate during semesters. Contains introduction on hedging strategies.
Contact Person: K.D. Meilke
Phone: 519-824-4120, Ext. 2769

UNIVERSITY COURSE
Frequency Offered: yearly
Attendance: 20-30
Brief Description: Detailed instruction on technical analysis, trading strategies, application in uses for outlook
Contact Person: L.J. Martin
Phone: 519-824-4120, ext. 2770

Organization: University of Manitoba, Dept. of Agri. Economics

COMMODITY FUTURES MARKETS 61.312
Frequency Offered: once per year
Attendance: 25 students
Brief Description: Theory and economic functions of commodity markets. The roles of the various participants; the determination of inter-temporal prices and various aspects of hedging.
Contact Person: Milton Boyd
Phone: 474-6031

COMPONENT OF INTRODUCTORY MARKETING COURSES
Frequency Offered: 1/year
Attendance: 40 - 60 students in 61.207
Brief Description: 3 hours introduction to the theory of futures markets and hedging.
Contact Person: Dr. R.M.A. Loyns
Phone: 474-9384

CENTENNIAL GRADUATE FELLOWSHIP
Frequency Offered: annual
Number of Awards: one
Brief Description: The Winnipeg Commodity Exchange is offering a fellowship for full-time graduate study in the area of Canadian futures markets and grain marketing in Agricultural Economics and Farm Management at the University of Manitoba. $10,000 Ph.D. or Masters fellowship covering a 12 month period.
Contact Person: Dr. J. A. MacMillan
Phone: 204-474-9259

Organization: McGill University, Dept. of Agricultural Economics
Macdonald College

AGRICULTURAL COMMODITY TRADING (Graduate Course) - 334-660B
Frequency Offered: alternate years
Attendance: 2 - 10 students
Brief Description: Topic include, hedging theory and practice, price theory, market efficiency, technical analysis, time series methods, and options.
Contact Person: John Henning
Phone: 514-398-7826

AGRICULTURAL COMMODITY TRADING (EXTENSION EDUCATION) - 334-660Y
Frequency Offered:
Attendance: 10 - 20
Brief Description: Topics include the economic functions of futures markets, basic theory, hedging fundamentals, speculation, fundamental and technical analysis, price relationships, policies, currency and financial futures, options and index futures.

COLLEGE COURSES

Organization: Centralia College of Agricultural Technology
Contact Person: Alison Lobb
Phone: 519-482-7167

ELECTIVE DIPLOMA COURSE: COMMODITY FUTURES
Frequency Offered: winter term (12 weeks)
Attendance: 10-35
Brief Description: Topics include marketing alternatives and introduces the use of hedging and futures mainly as an indicator of the cash price movements. Discussion of various systems of analysis--fundamental, technical, cyclical and behavioral.

Organization: Kemptville College of Agricultural Technology
Contact Person: Doug Gowenlock
Phone: 613-258-8277

FUTURES AND OPTIONS TRADING
Frequency Offered: 1 hr lec, 2 hr lab/ week for 10 weeks
Attendance: 15-35
Brief Description: Understanding futures and options commodities market, fundamental and technical analysis, hedging, basis vs spot pricing, fictional trading.

Organization: Lakeland College, Vermilion, Alberta
Contact Person: J. Robinson
Phone: 403-853-8487

AGRICULTURAL MARKETING
Frequency Offered: 2-3 secessions/year, 70 hrs/course
Attendance: 20
Brief Description: Topics include hedging, basic trading, speculation, cash and futures, technical and fundamental analysis, and basis behaviour.

Organization: University of Manitoba, School of Agriculture
Contact Person: O.P. Tangri, Dept. of Agricultural Economics
Phone: 474-9384

COMPONENT OF DIPLOMA COURSES
Frequency Offered: 1/year
Attendance: 75-80 students
Brief Description: 6 - 12 hours of basics on hedging relevant to Manitoba farms.

Organization: Olds College
Contact Person: Chuck Howard
Phone: 556-8356

AGRICULTURAL MARKETING
Frequency Offered: annual
Attendance: 75
Brief Description: A section of this course deals with the basics of Agricultural Commodity Futures with emphasis on the Canadian Market.

Organization: Ridgetown College of Agricultural Technology
Contact Person: Brian Doidge
Phone: 519-674-5456

USING AGRICULTURAL COMMODITY OPTIONS
Frequency Offered: 2 lec/ 1 lab per week for 13 weeks in fall sem.
Attendance: 28-35
Brief Description: Fundamental and technical analysis, reading signals, hedging, basis and options.

SEMINARS AND SHORT COURSES

Organization: Alberta Agriculture
Contact Persons: Errol Anderson and Doug Walbey
Phone: 403-948-8511 and 403-340-7612

EXTENSION COURSE: FUTURISM, THE COMMODITY TRADING GAME
Frequency: 12 per year
Attendance: 20-25
Brief Description: A 10 session extension course designed to instruct farmers in Canadian crop commodity (cash and futures) marketing. The emulation includes hypothetical market reports together with a computer program that administers participants amounts.

Organization: Assiniboine College
Contact Person: D. Vercaigne, K.M.S. Consulting and Commodity Marketing
Phone: 204-725-1510

COURSE: MODULE I: GRAIN MARKETING ANALYSIS
Frequency: 30 hours
Attendance: 15-20
Brief Description: Fundamental and Technical Analysis of grain trading. Use of the Grain Statistics Handbook and selected chart material.

COURSE: MODULE 2: MARKETING SYSTEMS
Frequency: 30 hours
Attendance: 15-20
Brief Description: Government and private institutions in Canadian grain trade. Basic hedging theory.

COURSE: MODULE 3: DEVELOPING YOUR OWN MARKETING PLAN
Frequency: 30 hours
Attendance: 15-20
Brief Description: Use of materials from the above two modules to develop onsight farm marketing programs. Introduction to Commodity Options. Use of the Royfarm Planner.

COURSE: ADVANCED GRAIN MARKETING (IN PLANNING PROCESS)
Frequency: 90 hours
Attendance: unknown --- new course
Brief Description: Use of microcomputers in a simulation exercise based on current market conditions. Analysis and access to Grassroots.

Organization: Canadian International Grains Institute
Contact Person: Mr. P. Westdal
Phone: 204-983-4973

SHORT COURSE: GRAIN MARKETING
Frequency: twice/year, 1 week
Attendance: 15
Brief Description: Approximately 2 hours/day is spent on the operations of futures markets in relation to grains. To register one must be recommended by a shipper, handler or exporter in the grain trade business.

Organization: Canadian Securities Institute
Contact Persons: John Hore and Dawn Quigley
Phone: 416-921-5950

CANADIAN FUTURES EXAM COURSE
Frequency: regular exam quarterly
Attendance: no max
Brief Description: Trains people to pass exam which is the qualification for futures brokers in Canada to deal with the public.

CANADIAN COMMODITY FUTURES EXAM
Frequency: regular exam quarterly
Attendance: no max
Brief Description: Requirement for supervisors of futures firms or branch offices.

Organization: University of Guelph, Continuing Education

EXTENSION COURSE
Frequency: yearly
Attendance: 25
Brief Description: course for industry personnel on using futures
Contact Person: L.J. Martin
Phone: 519-824-4120, EXT 2770

EXTENSION COURSE
Frequency: yearly
Attendance: 50
Brief Description: 4 days, all topics in commodity trading
Contact Person: G. Lodge
Phone: 519-824-4120

Organization: Lakeland College
Contact Person: John Robinson
Phone: 403-853-8487

COURSE: FUTURES MARKETING
Frequency: 3 separate courses, 18 hrs each
Attendance: 15 max
Brief Description: Topics include hedging, basis, dealing with your broker. Course is directed towards to the farmer.

Organization: University of Manitoba, Dept. of Agri. Economics
Contact Person: M. Boyd and R.M.A. Loyns
Phone: 474-9384

SHORT COURSE: "INTRODUCTION TO HEDGING AND TRADING"
Frequency: 2 - 3 times/year
Attendance: 25 max.
Brief Description: Hedging, Basics of Trading, Speculation, Cash and Futures Prices, Technical and Fundamental Analysis, uses of brokers, marketing consultant.

Organization: Richardson Greenshields of Canada Ltd.
Contact Person: Mr. Howard Howe
Phone: 416-860-7386

SEMINARS: VARIOUS TOPICS
Frequency: on demand
Attendance: 10 - 100 depending on the topic
Brief Description: Topics include, hedging, market outlook, options on futures for agricultural commodities, metals, and currency futures.

Organization: Ridgetown College of Agricultural Tech.
Contact Person: Brian Doidge
Phone: 519-674-5456

COURSE: INTRODUCTION TO COMMODITY FUTURES
Frequency: 6 weeks of 1 day/week (4 hrs), 2 times/year
Attendance: 20 - 24/course
Brief Description: Introductory course to futures markets, hedging, basis. Reading market signals, using futures.

COURSE: ADVANCED COMMODITY FUTURES
Frequency: 6 weeks of 1 day/week, (4 hrs) 1 time/year
Attendance: 15-20/course
Brief Description: Using futures markets, reading signals, technical and fundamental analysis, options.

Organization: Saskatchewan Agriculture
Contact Person: Wayne Holt and Lyle Stavness
Phone: 306-787-2293 and 306-787-5965

COURSE: "MARKETING GAME"
Frequency: November - March
Attendance: 24 max
Brief Description: The marketing game is part of the Farming to Win Program, which is a two year goal directed farm business management course. The marketing game offer a hands-on approach to hedging, speculating, etc. on a simulated farm model.

Organization: Stow Futures, Winnipeg, Manitoba
Contact Person: Harold Davis
Phone: 204-947-6634, 1-800-665-0095 TOLL FREE

SEMINAR: "IS THE FUTURES MARKET FOR YOU?"
Frequency: Every 3 weeks to 1 month, various rural locations
Attendance: open to public, course materials provided
Brief Description: A two hour course explaining the basics of the futures market, its relationship to the cash market, and hedging strategies. Particular emphasis is placed on local elevator basis, its determinants, and how awareness can determine the optimum producer strategy in either cash or futures.

PUBLICATIONS

Organization: Alberta Agriculture
Contact Person: David Walker
Phone: 403-427-7132

GRAINS AND OILSEEDS MARKETING MANUAL
Frequency: 6/year, 2nd edition 1984, about 270 pages
Circulation: total printing 20,000
Brief Description: Six modules include introduction of marketing alternatives, Grain prices and how they are determined, commodity futures marketing, how cash prices are determined, hedging by farm managers, marketing strategies. This publication is used in conjunction with extension activities.

Organization: University of Alberta, Dept. of Rural Economy
Contact Person: J.H. Copeland
Phone: 403-432-3715

BULLETIN ARTICLE: WHEN TO LIFT YOUR HEDGE: CANOLA 1983/1984
Frequency: once. Agri. and Forestry Bulletin Vol. 6. No. 4 Dec. 83
Circulation: 4000 circulation
Brief Description: an example of selective hedging of canola

Organization: Canadian International Grains Institute
Contact Person: Mr. P. Westdal
Phone: 204-983-4973

BOOK - GRAIN MARKETING IN CANADA - BY A. WILSON
Brief Description: Some chapters in the book deal with the operation of futures markets in Canada, along with marketing concepts such as basis and hedging.

BOOK - GRAINS AND OILSEEDS: HANDLING, MARKETING AND PROCESSING
Brief Description: Some chapters in the book cover the use of futures markets for grains and oilseeds.

Organization: Canadian Securities Institute
Contact Persons: John Hore and Dawn Quigley
Phone: 416-364-9130

BOOK - TRADING ON CANADIAN FUTURES MARKETS - EDITED BY J. HORE
Brief Description: Main Textbook for Canadian Futures Exam, $25/copy, 5000 sold. (3rd ed. 1987).

Organization: Manitoba Agriculture
Contact Person: J. Prins, Economics Dept.
Phone: 204-945-4936

NEWSLETTER: MANITOBA WEEKLY
Frequency: weekly $31.20/yr or $2.6/month
Circulation:
Brief Description: Outlines the weeks prices in agricultural commodities with a brief market analysis.

Organization: McLeod Young Weir Ltd.
Contact Person: Mr. H. Hanec
Phone: 204-944-0025

NEWSLETTER: CANADIAN GRAIN FUTURES REPORTER
Frequency: weekly
Circulation: 1000 Subscription $75/year
Brief Description: Weekly market comment on Canadian grains and oilseeds, and USA grains and oilseeds. Technical and fundamental analysis with recommendations for hedgers and speculators.

Organization: Merrill Lynch Canada Ltd.
Phone: 204-944-9267

PUBLICATION: FARMING AND FUTURES: A GUIDE TO HEDGING IN GRAIN AND LIVESTOCK
Brief Description: An introduction to the futures market, what is basis and hedging and how it can be used.

PUBLICATION: THE MERRILL LYNCH GUIDE TO HEDGING
Brief Description: An introduction to hedging and how farmers and business executives can use futures markets to their advantage.

PAMPHLET: A GUIDE TO COMMODITY SPREADS
Brief Description: An introduction to commodity spreads and spread trading.

RESEARCH PUBLICATIONS: 'WEEKLY FUTURES REPORT'
'WHEAT BIMONTHLY'
'TROPICAL SOFTS MONTHLY'
'CORN BIMONTHLY'
'LIVESTOCK MONTHLY'
'SOYBEAN COMPLEX UPDATE'
Brief Description: Topical articles on different areas of futures, outlook for commodities, technical and options comments.

Organization: Ontario Ministry of Agriculture and Food
Contact Person: John DePutter
Phone: 519-433-0133

NEWSLETTER: "AG-ALERT
Frequency: monthly
Circulation: 100's
Brief Description: Monthly newsletter to subscribers outlining markets, trends and suggested market positions in both cash and futures.

Organization: Richardson Greenshields of Canada Ltd.
Contact Person: Howard Howe
Phone: 416-860-7386

NEWSLETTER: "OPINION"
Frequency: biweekly
Circulation: 2200
Brief Description: Topics include outlook information on commodities, interest rates, stock indices futures, currency and metals.

SPECIAL REPORTS
Frequency: quarterly
Circulation: depends on request from branch offices, varies with the topic
Brief Description: Covers current issues of interest on futures for a variety of commodities, currencies and metals.

Organization: Ridgetown College of Agricultural Technology
Contact Person: Brian Doidge
Phone: 519-674-5456

ARTICLES ON MARKETING METHODS IN Ontario Corn Producers Magazine.
Frequency: 10 issues/year
Circulation: 25000 corn producers in Ontario
Brief Description: Articles cover range of topics, but 8 or 9 in a series of 32 have dealt with futures markets, hedging and options.

Organization: Winnipeg Commodity Exchange
Phone: 204-949-0495 Telex 07-587778

LEAFLET: "PUBLICATIONS OF THE WINNIPEG COMMODITY EXCHANGE"
Brief Description: a summary of all the publications available through the WCE

PAMPHLET: 'COMMODITY CONTRACTS AND TRADING FACTS'
Frequency: single publication, available on request
Brief Description: a description of contracts specifications available on the WCE

PAMPHLET: 'METRIC PRICE CONVERSION TABLE'
Brief Description: a summary of metric conversions for commodity measurements

LEAFLETS: 'WINNIPEG FLAXSEED FUTURES'
'WINNIPEG RAPESEED FUTURES'
'WINNIPEG RYE FUTURES'
'WINNIPEG ALBERTA BARLEY FUTURES'
'WINNIPEG BARLEY FUTURES'
'WINNIPEG FEED WHEAT FUTURES'
'WINNIPEG OATS FUTURES'
Brief Description: each leaflet provides a summary of contract specifications for a particular commodity on the WCE

BROCHURE: THE WINNIPEG COMMODITY EXCHANGE
Frequency: single publication, available on request
Brief Description: a description of the history of the Winnipeg Commodity Exchange, its trading floor operations, and the use of futures market.

STATISTICAL ANNUAL
Frequency: annual
Circulation: $6.00 for WCE members, $10.00 for non members (+ postage)
Brief Description: This book provides statistics for the cash and futures markets of the WCE during the crop year running from August 1 to July 31.

EXCHANGE NEWSLETTER
Frequency: monthly
Circulation:
Brief Description: This newsletter provides an update of events of the exchange, membership news, monthly statistics, and information on issues concerning the grain and futures industries.

DAILY QUOTE CARDS
Frequency: daily
Circulation: $20 per quarter (+ postage, fed. tax and Man. tax)
Brief Description: Grain, CWB, Livestock, Financial and F.O.B. cards of price quotations.

GRAIN REPORT
Frequency: weekly
Circulation: $10/year
Brief Description: weekly high, low and closing prices for the six agricultural commodities traded along with volume and open interest for each contract traded.

PUBLICATION: HEDGING CANADIAN GRAINS-BY C. CARTER AND R.M.A. LOYNS
Frequency: single publication (latest revision 1987)
Circulation: 8000 copies sold $5.00/copy
Brief Description: Hedging, mechanics of trading, basis behaviour, Canadian grains.

PAPERS

Carter, C. "An Introduction to Futures Markets in Canada" in Farm Management and Marketing for Agricultural Lenders Occasional Series No. 13, Department of Agricultural Economics, University of Manitoba, 1981.

Carter, C. and R.M.A. Loyns. "Alternative Hedging Strategies for an Alberta Feedlot Operator: A Comment," Canadian Journal of Agricultural Economics 31(July 1983).

Carter, C. and R.M.A. Loyns. "Futures Markets as a Canadian Farm Management Tool," Canadian Journal of Agricultural Economics, Proceedings Issue 31(1983).

Carter, C. and G.C. Rausser. "Lead-Lag Relationships in Thinly and Heavily Traded Futures Markets," Journal of the American Statistical Association (forthcoming, subject to revision).

Carter, C. "An Evaluation of the Pricing Performance of the Barley Futures Market," Western Journal of Agricultural Economics 9(July 1984).

Carter, C. Street and Futures Price Relationships in Canadian Open-Market Grains, Extension Bulletin, Dept. of Agricultural Economics, University of Manitoba, November 1984.

Carter, C. and R.M.A. Loyns. "Hedging Feedlot Cattle: A Canadian Perspective," American Journal of Agricultural Economics 67(February 1985).

Carter, C. "Hedging Opportunities for Canadian Grains," Canadian Journal of Agricultural Economics 33(March 1985).

Carter, C. and W. Mooney. "Rapeseed Basis Behaviour," American Journal of Agricultural Economics (forthcoming, subject to revision).

Gaston, C. and Larry Martin. Hedging Strategies to Protect the Financial Position of Canadian Beef Feedlot Operators, Bulletin AEEE/84/3. School of Agricultural Economics and Extension Education, University of Guelph, June 1984.

Loyns, Marketing and Marketing Strategies for Manitoba Farm Products, Extension Bulletin, Dept. of Agricultural Economics, University of Manitoba, February 1981.

Loyns, R.M.A. "Farmer's Use of Forward Contracting and Futures Markets" in Farm Management and Marketing for Agricultural Lenders Occasional Series No. 13, Department of Agricultural Economics, University of Manitoba, 1981.

Martin, L. and Philip Gracia. "A Disaggregated Analysis of Price Forecasting Performance of Futures Markets for Live Cattle and Live Hogs," American Journal of Agricultural Economics, May 1981.

Martin, Larry, "Financial Management Implications of Using Futures Markets," Can. Journal of Agricultural Economics, July 1983.

Martin, L. and Philip Gracia. "A disaggregated Analysis of Price Forecasting Performance of Futures Markets for Live Cattle and LIve Hogs, in Readings in Futures Markets, Vol V, CHicago Board of Trade, 1983.

Martin, L. and David Hope, An Analysis of Strategies for Pricing Corn in Ontario, Bulletin AEEE/83/4, School of Agricultural Economics and Extension Education, University of Guelph, April 1983.

Martin, Larry and David Hope, "Risk and Returns from Alternative Marketing Strategies for Ontario Corn Producers," Journal of Futures Markets, Fall 1984

MISCELLANEOUS

Organization: Alberta Agriculture
Contact Person: David Walker
Phone: 403-427-7132

GENERAL COUNSELLING AND EXTENSION MEETINGS
FREQUENCY: varies
Attendance: varies
Brief Description: Alberta Agriculture recognizes the need to provide assistance to farmers in their market related activities is as important as those for other elements of their business. There is no reticence on the part of the department to get involved in such issues

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Organization: McGill University, Dept. of Agricultural Economics
Macdonald College
Contact Person: John Henning
Phone: 514-398-4001

RESEARCH: USE OF FUTURES MARKETS BY QUEBEC HOG AND CORN PRODUCERS
Brief Description: Research in progress of the hedging effectiveness in the presence of commodity support programs.

Organization: Ontario Ministry of Agriculture and Food
Contact Person: John DePutter
Phone: 519-433-0133

PHONE SERVICE: HOT-LINE
Frequency: Updated twice daily
Brief Description: Phone in for taped message of market quotes, news and recommendations - "Ag-Alert".

MARKETING CLUBS
Brief Description: Numerous marketing clubs exist within differenct counties, Lambton, Kent, and Middlesex. Please contact the Ontario Ministry of Agriculture and Food Local offices.

Organization: Ridgetown College of Agricultural Technology
Contact Person: Brian Doidge
Phone: 519-674-5456

VIDEO: USING AGRICULTURAL COMMODITY FUTURES
Frequency: for use in independent study course program through the University of Guelph.
Circulation: 60 copies sold
Brief Description: Options and their use for corn, soybeans, hogs and cattle.
