PREDICTORS OF THE WIFE'S INVOLVEMENT IN FARM DECISION-MAKING

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ABSTRACT

This study investigates the farm wife's role in decision-making related directly to the farm business. Specifically examined are predictor variables hypothesized to be associated with the extent of the wife's involvement in decisions concerning the general management of the farm enterprise and decisions leading to the adoption of agricultural innovations.

The respondents were sixty-seven wives of commercial strawberry growers living in British Columbia's Fraser Valley. Data were collected in personal interviews and analyzed using Pearson product-moment correlation, one-way analyses of variance followed by Duncan's New Multiple Range Tests, and factor analysis by the principal component method.

Focusing on directional hypotheses derived from the literature, the analysis yielded the following findings with parallel patterns of relationships emerging for involvement in both types of decisions studied:

1. Wives who seek information about farm matters are also likely to participate in decisions about those matters, although contact with the Agricultural Extension Service, considered as a specific type of information-seeking activity, does not appear to be associated with decisionmaking involvement.

2. Wives who participate in farm tasks also tend to participate in farm decisions.

3. Income and farm size are negatively associated with the wife's involvement in farm decisions, although other indicators of socioeconomic status such as age, education, and social participation do not appear to affect her participation.

4. The number of children in the family is negatively related to the wife's participation in farm decision-making.

5. The husband's acceptance of agricultural innovations is not associated with his wife's involvement in decisions about those innovations or about farm matters in general.

Three independent factors--labeled <u>Wife's Business</u> <u>Partner Role, Age</u>, and <u>Socioeconomic Status</u>--were reflected in the interrelationships among all variables. Defining the <u>Wife's Business Partner Role</u> were positively intercorrelated variables relating to the wife's involvement in general farm decision-making, adoption decision-making, information-seeking, and farm tasks.

Interpretation of the findings focuses on behaviors associated with the extent of the wife's decision-making activity, and how resources such as money, time, energy, and skills may affect her emphasis on a business partner role. Implications for educational program planning are discussed by considering existing family decision-making patterns as frameworks for the diffusion of agricultural information.

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CHAPTER I

INTRODUCTION

Farm families continually make decisions to maintain and improve the functioning of the farm enterprise. Some decisions relate to routine matters, while others involve large commitments of resources or changes in the structure of entire operations.

Considering the interdependence of the farm business and household units, traditional realms of husband and wife, some interesting speculations are suggested where participation in such decisions is concerned. Although each spouse's major interests and abilities presumably lie within his or her traditionally determined territory, neither husband nor wife can ignore the fact that as family resources are allocated between production and consumption, cooperation may be necessary for survival.

Since the husband is usually assumed to have the option of extending his influence to decisions relating to the household, the not-so-usual circumstances contributing to possibilities for the wife to participate in decisionmaking related directly to her husband's business are particularly intriguing.

The farm wife's potentialities as a business partner is not a new idea. One needs scarcely strain the imagination

to recall the prototype farmer as a bib-overalled battler for the nation's bread, with his wife ever beside him, stalwart and supportive. Aspects of her partnership role have led the farm wife to be praised in the pages of a small town newspaper in a tribute as sentimental as its author's name (Valentine, 1963), and singled out among women in the controversial comment of a nation-wide report (Royal Commission on the Status of Women, 1970).

It may even be that the farm wife would find it difficult, if not impossible, to ignore her business partner role if she wanted to. Today's wives can still identify with the observation of a farm wife fifty years ago (Sawtelle, 1924, p. 510):

Nowhere does a woman have a better chance to be her husband's partner in every sense of the word. The business itself is spread out in front of her door. Its details come into her kitchen. She sees the plans for the work going on about her. She hears the talk of the business at her table.

Whether the wife exercises the prerogative that would seemingly be hers is still somewhat a matter of conjecture, When the farm wife's decision-making role has been considered at all, it has usually been a feature of analyses of the interrelating occupational and family roles of farm husbands and wives, focusing on the relative involvement of each spouse in farm and home areas, with emphasis on household activities.

Surprisingly few studies have examined the wife's involvement in farm decision-making even though:

1. The economic interdependence of the farm and household units has been recognized by both economists and sociologists (Heady, Black, and Peterson, 1953; Longmore and Taylor, 1951; Thomas, 1955).

2. A particular relationship appears to exist between the farm wife's role and the occupational performance of her husband (Wilcox and Lloyd, 1932; Wilcox, Boss, and Pond, 1932; Straus, 1958, 1960).

3. Patterns of democratic decision-making seem to be widely diffused among farm families (Blood and Wolfe, 1960; Burchinal and Bauder, 1965).

Data would seem to be called for to tie decisionmaking studies into role analyses related to the institutions of farm and family. Such information could be practically applied in fields such as adult education, where a specific knowledge of the target audience is considered as desirable, if not essential, in successfully planning, implementing, and evaluating educational programs.

Understanding who in the family is likely to be involved in farm decision-making, and what factors are likely to be associated with the extent of involvement, can be seen as particularly useful in providing a framework for developing the farm family's decision-making skills and facilitating the diffusion of decision-making information.

This study helps to identify such a framework by examining that part of the farm wife's decision-making role overlapping her husband's occupational role. The respondents

were sixty-seven wives of commercial strawberry growers in the Lower Fraser Valley of British Columbia. The survey method was used, with data collected in personal interviews.

PURPOSE OF THE STUDY

The general purpose of the study was to investigate the wife's role in farm decision-making.

Specifically examined were variables predicted to be associated with the extent of her participation in decisions relating to farm matters in general and the adoption of agricultural innovations in particular.

The analysis focuses on the following questions:

1. Do wives who actively seek information about farm matters also participate in decisions about those matters? More specifically, is the wife's contact with the Agricultural Extension Service associated with her involvement in farm decision-making?

2. Do wives who participate in farm tasks also participate in farm decision-making?

3. Are socioeconomic characteristics, such as income, size of farm, age, education, and social participation, associated with the wife's involvement in farm decisions?

4. Is the number of children in the family associated with the wife's involvement in decisions pertaining to the farm business?

5. Is the husband's acceptance of technological change, as indicated by his adoption of agricultural

innovations, related to his wife's involvement in decisions about those innovations and her participation in decisions about farm matters in general?

THE SETTING

The Fraser Valley, home of the respondents, is a part of the Lower Coast Area in British Columbia. Some 20 miles wide, the Valley extends eastward about 100 miles from the Strait of Georgia. It is bound on the north by the Coast Range, on the east by the Cascade Mountains, and on the south by the International Boundary.

The Valley's fortuitous combination of fertile soil, a level terrain, and a moderate marine climate has led to a high degree of agricultural development (Province of British Columbia, 1962). The growing of vegetables and small fruits is the principal agricultural activity of Valley farmers, although major production is also concentrated in dairy, poultry, and beef cattle.

The function of the Agricultural Extension Service in the Fraser Valley is performed by local District Agriculturists, who are concerned with general farming, and by local District Horticulturists, who specialize in crops such as strawberries and other small fruits.

LIMITATIONS OF THE STUDY

Several limitations must be considered in interpreting the findings from this study.

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The first consideration involves both the scope and focus of the investigation. The study is generally approached through a framework of decision-making, rather than couched in the terminology of role analysis. The wife's role is considered only as it relates to the extent of her self-reported involvement in activities directly concerning the farm business.

A related consideration concerns the generality of the findings. A sample of families involved in a specific aspect of agricultural production (strawberry growing) was selected so that items relating to decision-making, information-seeking, and task involvement might be considered as relevant to all the respondents studied. Although all the variables examined, with some modification, are relevant to farm families in general, the selection of such a specialized sample necessarily restricts generality. At one extreme, the respondents are quite likely representative of other small fruit producers in the Lower Fraser Valley, while at the other extreme, the essence of the study possibly parallels analyses of occupations other than farming, such as business or the ministry, where wives have been found to play supporting roles (Turner, 1970).

In any case, generalization of the findings to other populations should be done carefully.

A final limitation is posed by the construction of indices operationally defining the wife's overall participation in farm decision-making, information-seeking, and tasks.

The ad hoc nature of these indices did not seem to warrant the development of refined instruments. Although they appeared to serve the purposes for which they were designed, the indices remain specific to the sample examined.

PLAN OF THE STUDY

The literature relating to analyses of farm family decision-making, with emphasis on the decision-making process and patterns of decision-making behavior, is surveyed in the following chapter.

The hypotheses derived from the literature, the operational definitions utilized, and procedures in sampling, data collection, and data analysis, are discussed in Chapter III.

A description of the respondents, with particular reference to the predictor variables, is reported in Chapter IV to establish a background for further investigation and interpretation of the data.

Findings relating specifically to the wife's farm decision-making role are presented in Chapter V, which examines the wife's involvement in decisions relating to general farm matters and decisions concerning the adoption of agricultural innovations. The focus of the analysis is on the variables predicted to be associated with the extent of her overall participation in such decisions.

Highlights of the study are reviewed and discussed in Chapter VI.

CHAPTER II

REVIEW OF LITERATURE

Analyses of farm family decision-making have concerned both the decision process and decision-making patterns. Phases in the decision process and definitions of rationality implied in decision-making behavior have been major issues directly reflecting theoretical background, while research relating specifically to the wife's participation in farm decision-making has focused on her ability to play a supporting role and her involvement in decision-making relative to that of her husband.

THE DECISION PROCESS

A broad theoretical framework of the decision-making process has emerged in recent years, encompassing concepts and principles taken from sociology, psychology, economics, and related disciplines. Although most formulations of the process vary in terminology and emphasis, there seems to be agreement that decision-making usually involves a series of rational behaviors occurring from the time an issue is recognized to where a course of action is selected and implemented.

Phases in Decision-Making

Dewey's (1910) conceptualization of the decisionmaking process is probably best known. Phases in what Dewey

called "reflective thought" can be summarized as: (a) identification of the problem; (b) observation of conditions; (c) formulation and consideration of a suggested conclusion; and (d) testing of the conclusion by overt or imaginative action.

Similarities between Dewey's outline of sequences and three representative models of the decision process used in analyses of farm decision-making are easily recognized, although some modification of the phases is necessary as one model after another is examined.

Individual and group decision-making in farm families has been studied by Dix (1957), who combined theories from the fields of management and statistics and developed a sequence of three phases: (a) consideration of alternatives; (b) thinking through the consequences of the alternatives; and (c) making the final choice. The model provided a framework for identifying phases consciously used by families in making decisions about the farm and home.

A normative decision-making model applying specifically to farm operators has been formulated by Rieck and Pulver (1962), who consider the decision process in terms of four phases: (a) orientation; (b) observation; (c) analysis and evaluation; and (d) implementation. Empirical measures of the model have been designed to evaluate decision-making procedures used, rather than to follow through the chronological steps of the process.

A major framework within which rural sociologists have studied decision-making concerns the adoption or acceptance of innovations, ideas an individual perceives as new. The adoption process is considered as a specific type of decision-making involving a sequence of phases or stages that an individual passes through from first learning about an innovation to final adoption.

A five-stage model of the adoption process has been developed (Lionberger, 1960; Rogers, 1962), and includes stages relating to: (a) awareness, where the individual is introduced to the innovation, but lacks complete information about it; (b) interest, where information is gathered; (c) evaluation, where the innovation is mentally applied; (d) trial, where the innovation is observed in use; and (e) adoption, where a decision is made to continue full use of the innovation. Since the decision to adopt involves either the acceptance or rejection of a single course of action, the adoption process does not include a phase relating to the production of alternative solutions.

While there is little evidence as to exactly how many stages are in the adoption process, there are indications that the concept of stages has some validity--individuals have been able to distinguish one stage from another (Beal, Rogers, and Bohlen, 1957) and to identify the points in time when they went through each stage (Copp, Sill, and Brown, 1958).

A modified version of the adoption process has recently been proposed by Rogers and Shoemaker (1971), who refer to the "innovation-decision" process, which includes the option of rejecting the innovation as well as later confirmation of the adoption or rejection decision. Although the model has not yet been made operational for research purposes, four main functions have been conceptualized: (a) knowledge; (b) persuasion, including attitude formation and change; (d) decision to adopt or reject; and (e) confirmation.

None of the models described assumes that every decision involves all phases of the decision process. Some situations may require new information while others may not; alternatives may be given or they may need to be determined. Intelligence, introspection, incubation, inspiration, and insight may affect the flow of the entire process.

Rationality in Decision-Making

Since methodical conduct is implied in the decision process, it is not surprising that most students of decisionmaking have conveniently ignored Merton's (1936) contention that the success or failure of an action is often due to unanticipated consequences resulting from chance, luck, ignorance, or other factors over which man has no control.

Concerns in decision-making have instead focused on considerations of rationality--good thinking opposed to bad, satisfactory solutions opposed to unsatisfactory, and so on.

The major problem in considering rationality is its definition. It cannot be defined as the selection of the most appropriate solution without first determining how appropriateness is to be assessed. Numerous definitions of rationality have been offered, and tend to be of two types--those relating to the decision process and those relating to decision outcomes (Brim and others, 1962).

Efforts to define rationality according to the decision process include the practical "how-to" books, such as Malone and Malone's (1958) advice on improving farm family decision-making skills by working through a developmental process emphasizing the consideration of goals and the searching for alternative solutions.

Another example is Rieck and Pulver's (1962) definition of rationality as an optimizing process in which the farm operator attempts to make decisions to attain maximum family satisfactions. The results of the decisions are not considered. Instead, values are assigned to responses given by the operators in answer to questions concerning their behavior at each of four steps in the decision process. Responses--categorized as rational, intermediate, or irrational, serve as the basis for "rationality ratings" used to compare each operator's decision-making ability with the normative standard.

The contrasting idea of using outcomes of decisions as evidence of rationality is based on the assumption that one can infer from the outcome whether or not the decision

process was rational, without actually considering what in the process itself was good or bad (Brim and others, 1962). Using outcome criteria operationally defining rationality, individuals can be ordered according to the degree of rationality supposedly occurring during decision-making.

Compatible with this consideration of rationality is the five-stage adoption model, which represents a positive sequence of responses involving the assumption that rational behavior leads only to acceptance of innovations. Distributions of adoption scores, based on farm operators' selfreported progress towards the adoption of a number of innovations, are customarily used to determine factors associated with adoption behavior (Lionberger, 1960; Rogers, 1962). There are indications that such scores are reasonably valid, reliable, and internally consistent, although convincing evidence of unidimensionality has not been apparent (Rogers and Rogers, 1961).

Since the traditional adoption model does not allow for non-rational decisions, its adequacy has been questioned by Campbell (1966), who proposes two dichotomies--rational or non-rational decisions and innovation or problem-oriented decisions. The combination of these two dimensions produces four ideal-type processes, with decision phases hypothesized for each process.

The concept of "innovation response states" has been introduced by Verner and Gubbels (1967), The five response states--unawareness, continuation, rejection, adoption, and

discontinuance--are not intended to replace the five adoption stages, but to allow for an identification of an individual's relationship to an innovation without the assumption that only a positive response is rational.

Also representing a departure from the traditional model is Rogers and Shoemaker's (1971) recent redefinition of adoption as a decision to make full use of a new idea as "the best course of action available," suggesting that rational behavior may well lead to rejection of an innovation.

Any consideration of rationality in decision-making inevitably leads to the historic question of whether or not man is a rational creature. One is tempted to compromise and accept what Simon (1957) says is "approximate rationality," where man is seen as having limited knowledge and ability to apply in decision-making. Until the debate is resolved, definitions of rational decision-making can probably best be considered as more useful for prescribing, than for describing, man's behavior in actual decision situations.

PATTERNS OF DECISION-MAKING

When decision-making occurs in families, patterns of interaction between the husband and wife tend to emerge. While couples may vary considerably in terms of each spouse's involvement in particular types of decisions, there have come to be what Kenkel (1966) calls "preferred" patterns of democratic decision-making.

Such patterns, which seem to be widely diffused among farm families (Blood and Wolfe, 1960; Burchinal and Bauder, 1965), imply that husbands and wives jointly share responsibility for decisions, entering into various phases of the decision process according to their interests and abilities.

The Wife's Supporting Role

Some occupations appear to be structured in a way that permits the wife to build a supporting role anchored to her husband's occupational role. The wife who is able to play such a supporting role effectively not only receives credit for her husband's success, but strengthens her claim to play a significant part in decision-making relative to her husband's occupation (Turner, 1970).

The existence of a particular relationship between the farm operator's occupational role and his wife's ability to play a supporting role has been recognized in several studies spanning a thirty-year period.

Investigating the "human factor" in farm management, Wilcox and Lloyd (1932) found that farmers with high scores on "wife's cooperation" also tended to have high incomes. In a somewhat similar study, income was found to be positively associated with measures of wife's cooperation when the reasons for farmers' economic success were considered (Wilcox, Boss, and Pond, 1932). When asked to list factors they thought responsible for their success, the farmers ranked wife's cooperation second only to farming experience. Wives' contributions to economic success in the settlement of Washington's Columbia Basin Project were considered by Straus (1958), who found that wives of "high-success" operators were more likely to prefer husband-dominant decisionmaking patterns than were wives of "low-success" operators. Wives in the two groups appeared to have different values, attitudes, and personality characteristics, although there were no appreciable differences in background characteristics or direct economic contributions to the family. Straus suggested that the factors differentiating the two groups were those which enabled the wife to play "a personally supportive and complementary role in helping her husband to meet the many decisions, difficulties, and frustrations which arise in developing a new farm."

Later Straus (1960) tested the hypothesis that the husband's technological competence is associated with an integrative-supportive wife role. Scores on a "wife role supportiveness index" were found to partly explain the variance in husband's adoption scores. However, there was no indication of whether the wife's ability to play a supporting role facilitated her husband's increasing competence, or whether his increasing competence encouraged her emphasis on a supporting role.

The Wife's Decision-Making Role

Since the farm business is traditionally the realm of the husband, it can hardly be expected that the wife--in

spite of either democratic decision-making norms or her ability to play a supporting role--will assume the major responsibility for decisions relating to the farm business. Some insights into the nature and extent of her influence, however, can be teased out of several studies.

Perhaps the most extensive investigations in terms of their relevance to the wife's decision-making role are Wilkening and Bharadwaj's (1967, 1968) studies of the dimensions of farm and family decision-making. Drawing on findings from an earlier investigation of role consensus in decision-making (Wilkening and Morrison, 1963), wives were asked how eighteen farm and family decisions were "actually made" while husbands were asked how the decisions "ought to be made." The husbands' responses were thought to reflect the norms of the family and perhaps of the community, while the wives' responses indicated how the decisions were made in practice.

Factor analysis of the decision items (based on the wives' responses) yielded two rather well-defined factors in the farm area. "Farm resource" decisions related to buying or renting land, borrowing money for the farm, and buying farm equipment; "farm operations" decisions concerned how much fertilizer to buy, whether to try a new crop, and what make of machinery to buy.

Intercorrelations of husband and wife measures, taken separately, indicated that wives who were expected to be, and actually were, involved in farm resource decisions also tended to be involved in farm operations decisions. The wife's

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overall involvement in farm decision-making appeared to be relatively independent of her involvement in household and family decision-making.

Other studies (Abell, 1961; Ross and Bostian, 1965; Royal Commission on Agriculture and Rural Life, 1956; and Slocum and Brough, 1962) have also examined husband-wife decision-making roles. All but one (Ross and Bostian, who included only farm decisions) have focused on involvement in both farm and family decisions, with emphasis on the family area.

Not surprisingly, when the findings for farm decisionmaking are sorted out, it seems that the husband tends to assume the major role although considerable evidence of joint decision-making is apparent. Decisions involving major changes or commitments of money seem to be made jointly in most families, or by the husband after discussion with the wife, while minor decisions appear to be made mostly by the husband alone. In one of the most extensive instances of joint involvement reported, 62 per cent of the wives in Abell's (1961) sample reported being consulted when farm financial plans were made. In contrast, only 35 per cent of the wives were involved in decisions concerning the purchase of farm equipment and machinery.

Observing that husband-dominant decision-making patterns appear consistently in some families, and joint decision-making patterns in others, several investigators have

considered factors possibly associated with the extent of the wife's involvement in farm decision-making.

In what now can be considered practically a historical study, Beers (1937) found that the tendency for husbands to be solely responsible for farm decisions was more marked in families living on large farms. He speculated that "as standards of competitive business efficiency enter farming, the splitting of executive responsibility into home and farm divisions may become more pronounced." Some twenty years later, Wilkening (1958) found support for the same hypothesis when he considered the husband and wife's overall involvement in both home and farm decisions.

Income and education were found to be negatively associated with the wife's participation in farm decision-making in Wilkening and Bharadwaj's (1968) study. Work roles and aspirations (goal-striving) were also explored. A positive relationship was noted between the wife's involvement in farm tasks and her involvement in farm decision-making. Aspirations for home improvements were also positively associated with involvement in farm decisions, although other aspirations (for farm improvements, community participation, and child development) appeared to have little effect on decision-making patterns.

The possibility that there is a relationship between the wife's perception of information sources and her participation in farm business operations has been suggested by Ross and Bostian (1965) in their investigation of the farm wife's

orientation towards media. Although one aspect of their study concerned the wife's involvement in farm decisions, the authors regrettably did not follow through with their promise to consider the association between media behavior and decisionmaking patterns (Bostian, 1970).

Primarily interested in explaining variance in husbands' adoption scores, Straus (1960) found little evidence of joint farm decision-making patterns in either high- or low-adopter groups. Observing that other wife-related variables did differentiate the two extreme groups, however, he concluded that further studies of the wife's role will likely result in a more complete understanding of adoption behavior than is possible when analysis is restricted to the customary socioeconomic and farm operator variables.

Neither Straus nor other investigators appear to have considered the wife's involvement in decisions to adopt specific practices, although findings from at least two studies suggest that she may have some influence in such matters.

Investigating adoption patterns as related to family factors, Wilkening (1953) found some indication that wives affected the acceptance of various technological changes-about 40 per cent of the 165 farm operators interviewed reported that their wives had encouraged such changes.

Farm wives included in Wilkening and Guerrero's (1968) study of aspirations and adoption were thought to influence the adoption of certain practices more than their husbands, apparently due to the wives' involvement in keeping

farm records and handling farm business affairs. There was some evidence that husbands and wives had different ideas about what constituted farm improvements. Husbands tended to be primarily concerned with management aspects of land and livestock, while wives were more interested in practices affecting immediate cash outlay and return.

In summary, analyses of the wife's farm decision-making role have tended to be a feature of investigations focusing on the relative involvement of husbands and wives in decisions pertaining to both farm and home activities. Although there is considerable evidence of joint decision-making in farm matters, few studies have examined factors possibly associated with the extent of the wife's participation in such decisions.

Those studies which have been reported have restricted analysis to predictors of the wife's involvement in decisions which can be considered as relating to the farm enterprise in general. Her particular involvement in decisions leading to the adoption of agricultural innovations does not appear to have been examined directly, even though the adoption process continues to provide a major theoretical framework for the study of farm decision-making.

CHAPTER III

PROCEDURE

The research strategy evolved from the formulation of directional hypotheses predicting variables expected to be associated with the extent of the wife's participation in farm decisions.

The survey method was utilized, with data relating to the wife's farm decision-making role collected in personal interviews with sixty-seven farm wives living in the Lower Fraser Valley of British Columbia.

The following sections present the hypotheses, the rationale for their directional predictions, and the operational definitions of the variables examined. Procedures used in sampling, data collection, and data analysis are then described.

HYPOTHESES

Directional hypotheses, advanced at the outset of the study and corresponding to the questions underlying its purpose, predicted that:

1. The wife's seeking of information about farm matters in general, and her contact with the Agricultural Extension Service in particular, is positively associated with her involvement in farm decision-making.

2. The wife's participation in farm tasks is positively associated with her participation in farm decisions.

3. Indicators of socioeconomic status--such as income, size of farm, education, and the wife's social participation--are negatively associated with the wife's involvement in farm decision-making, while age is positively associated.

4. The number of children in the family is negatively associated with the wife's participation in decisions pertaining to farm matters.

5. The husband's adoption of agricultural innovations is negatively associated with his wife's involvement in decisions about those innovations and about farm matters in general.

Clues sifted from the literature provided the rationale for the predictions.

Since decision-making patterns appear to evolve as husbands and wives participate according to their interests and abilities (Kenkel, 1966), it would seem to follow that wives who become knowledgeable about farm matters probably increase their chances of making a useful contribution in farm decision-making. Such knowledge might accumulate as the wife's perception of information sources is influenced by her involvement in the business operations of the farm (Ross and Bostian, 1965), or as responsibility in decisionmaking is accompanied by responsibility for gathering information about the content of the decisions. Since psychological involvement increases as information-seeking behavior becomes purposive (Rogers, 1962), active information-seeking would seem to imply a degree of personal commitment which might carry over into decision-making situations where the information is relevant.

It might be supposed then that the wife's seeking of information about farm matters in general, and her contact with the Agricultural Extension Service in particular, is positively associated with her involvement in farm decisions.

A distinctive feature of farm living is that the place of work is usually adjacent to the place of residence. Tasks tend to be close at hand, and farm work like woman's work is never done. The accessibility of such tasks and the availability of a wife to do them may result in the wife's assuming an active farm work role. Wives who do so seem likely to be interested in the outcomes of decisions directly affecting their work roles, and may find that their experience provides them with claims in decision-making. Involvement in decisionmaking might even lead to involvement in tasks in the first place, as responsibility for decisions overlaps into work roles as the decisions are implemented.

Since doing and deciding appear to be related, with patterns of family task allocation similar to those of decision-making (Wilkening and Bharadwaj, 1967, 1968), a positive association might be expected between the wife's participation in farm tasks and her participation in farm decisionmaking.

As socioeconomic levels increase, there is some indication that family decision-making roles become more specialized, with husbands tending to become less involved in household decisions and wives less involved in farm decisions (Beers, 1937; Wilkening, 1958; Wilkening and Bharadwaj, 1968). Decisions pertaining directly to the farm are perhaps of less concern to the wife when the allocation of resources between farm and home units is not particularly critical. As income and farm size increase, her opportunities to participate in the management of the farm business may be restricted by her limited knowledge and experience. Since funds are likely available to hire outside help, there may be little or no need for her to be involved in farm matters and she may find herself occupied instead with nonfarm activities.

Indicators of socioeconomic status such as income, size of farm, education, and the wife's social participation might therefore be expected to be negatively associated with the wife's involvement in farm decision-making, while age might be expected to be positively associated.

Variations in role as well as status are reflected in another socioeconomic variable, family size. Although family size does not appear to have been examined in studies of farm decision-making patterns, researchers not confined to rural populations have provided evidence that the larger the family, the more likely it is to be characterized by husbanddominant decision-making, even with social class held constant (Campbell, 1971; Nye, Carlson, and Garrett, 1971).

A wife with a large family may find that demands made on her in the household area leave little time for her to be involved in other activities, such as those relating to the farm business. Perhaps the fact that she has a large family in the first place is a manifestation of a particular orientation towards the mother role (or her husband's particular orientation towards the husband role).

In any case, it seems tenable that the number of children in the family is negatively associated with the wife's participation in decisions pertaining to farm matters.

While the wife's farm decision-making role has been the subject of relatively few studies, an abundance of data has been accumulated regarding her husband's decision-making activity, particularly where the adoption of agricultural innovations is concerned (Lionberger, 1960; Rogers and Shoemaker, 1971). Even though such data indicate that adoption behavior is associated with personal and social characteristics of the farm operator himself, his wife has received little attention. and her involvement in specific adoption decisions does not seem to have been examined at all. There is some indication, however, that the husband's acceptance of technological changes is associated with his wife's emphasis on a supporting role defined in terms of her activities as homemaker and mother, and that little joint decision-making in general farm matters appears to occur in high-adopter families (Straus, 1960).
Since the acceptance of agricultural innovations tends to be linked with socioeconomic status (Rogers and Shoemaker, 1971), it might be suspected that early-adopter families exhibit the "split" decision-making patterns found to be associated with increasing socioeconomic levels (Beers, 1937; Wilkening, 1958; Wilkening and Bharadwaj, 1968). Not only might the scope of the farm business affect the wife's opportunity to participate in farm decision-making in general, but the complexity often characterizing adoption decision-making may require specialized knowledge and skills she does not possess.

In keeping with this rationale, the husband's adoption of agricultural innovations might be expected to be negatively associated with his wife's involvement in decisions about those innovations and about farm matters in general.

MEASURES OF DECISION-MAKING

The wife's involvement in farm decision-making was operationalized by constructing two ad hoc indices, one dealing generally with overall management aspects of the farm enterprise (general farm decision-making), the other relating specifically to the adoption of agricultural innovations (adoption decision-making).

All of the decisions studied were thought to be representative of those normally encountered by farm families, and likely to have been considered within recent memory.

Participation in general farm decisions was determined by responses to items designed to reflect the relative involvement of husband and wife in twelve decisions concerning farm operations and resources. Some of the decisions related to routine matters, while others concerned major changes in the farm enterprise or large commitments of financial resources. Response categories for each decision item were "husband only, "husband more than wife," "husband and wife about equally," "wife more than husband," and "wife only." Alternatives were weighted from 2 to 6 in the order given, and a total score was computed for each respondent by summing the weights recorded.

Participation in adoption decision-making was measured by assessing the relative involvement of husband and wife in decisions leading to the adoption of six agricultural innovations. Involvement was considered at each of the five traditional stages in the adoption process--awareness, interest, evaluation, trial, and adoption--plus a sixth stage, discontinuance. Response categories--"husband only," "husband more than wife," "husband and wife about equally," "wife more than husband," and "wife only"--were assigned weights of 0, 10, 20, 30, and 40.

So that wives whose husbands had made more progress towards adoption would not accumulate spuriously high scores, a mean score for each innovation was calculated for each respondent by summing the weights recorded and dividing by the number of stages at which decisions were made. The subtotals for each innovation were then combined into a total score.

Individual decision items and a discussion of the validity and reliability of the decision-making indices are presented in Chapter V.

MEASURES OF PREDICTOR VARIABLES

Operationally defining the predictor variables for research purposes involved the construction of ad hoc indices measuring information-seeking and task involvement, and the consideration of other terms having varying connotations.

The wife's seeking of farm information was operationally defined by constructing an index combining: (a) the number of information sources used in decision-making; (b) the number of agricultural meetings, field days, and short courses attended during the past two years; and (c) weights recorded for four items concerning the wife's transmitting of agricultural information to her husband and he to her, with the responses "never," "seldom," "occasionally," "frequently," and "very frequently" assigned values from 0 to 4.

Extension contact, considered as a specific type of information-seeking activity, was defined as the total number of the wife's contacts with agents of the Agricultural Extension Service during the past year. Data were collected in categories of personal and impersonal contacts suggested by Rogers and Capener (1960).

Participation in farm tasks was measured by an index assessing the wife's involvement relative to that of her husband in twelve tasks directly related to the farm enterprise. A total score was computed by summing weights from 2 to 6 for the responses "husband only," "husband more than wife," "husband and wife about equally," "wife more than husband," and "wife only."

Individual items and indications of the reliability and validity of the task involvement and information-seeking indices are reported in Chapter IV.

In other definitions, income was considered as the gross value of sales from all agricultural operations and size of farm as the total number of acres farmed. Educational levels of both husband and wife were defined as the number of years completed in school, while ages were expressed in nearest whole number of years. For number of children, all children in the family were counted regardless of their age or residence.

The wife's social participation was measured by the Chapin Social Participation Scale (Chapin, 1955), with a total score formed by combining values from 1 to 5 for organization membership, attendance, financial contributions, committee membership, and holding office. The scale does not include church membership, although participation in churchrelated organizations is considered.

The husband's acceptance of agricultural innovations was defined in terms of an overall score indicating his progress towards the adoption of the same six innovations used in determining the wife's involvement in adoption decisions. For each innovation, values from 1 to 5 were assigned to the

stages of awareness, interest, evaluation, trial, and adoption (Alleyne and Verner, 1969a).

THE SAMPLE

Providing the data for the study were sixty-seven farm couples living in the Lower Fraser Valley, a highly diversified agricultural area of British Columbia.

The husbands were a part of Alleyne and Verner's (1969a, 1969b) sample of 100 commercial strawberry growers, randomly selected from a population of 194, and classified for this study by marital status and current residence. The resulting subsample, consisting of seventy-six couples still living in the Valley, eventually shrank to sixty-seven--seven wives refused to participate, one was on a six-month holiday, and another was omitted because of illness.

The fact that the respondents had not been randomly selected for this study was not viewed as particularly disturbing. The original sample offered the advantage of having already proved useful for the precise examination of adoption behavior, with the data collected by Alleyne and Verner (1969a, 1969b) conveniently providing a major variable, the husband's adoption score. Other available data suggested possible items for the indices relating to the wife's participation in decision-making, information-seeking, and farm tasks.

DATA COLLECTION

Data were collected in personal interviews during the fall of 1970. Wives self-reported their involvement in decision-making, and were the source of all other data except income, size of farm, and husbands' adoption scores, which were taken from the husbands' responses recorded by Alleyne and Verner (1969a, 1969b).

The interview schedule (Appendix D) was pretested on five farm wives not included in the sample and five University of British Columbia student-wives with farm backgrounds. The relevancy of the decision-making, informationseeking, and task involvement items was discussed with local Agricultural Extension Service personnel.

Sixty wives were interviewed by the investigator, while two University of British Columbia women graduate students interviewed the seven wives who spoke little or no English. Interview sessions averaged about forty-five minutes. Husbands were not present.

Responses to open-ended questions were recorded on face sheets identifying each respondent, while other responses were recorded directly on computer coding forms and later keypunched on cards for processing at the University of British Columbia Computing Centre.

DATA ANALYSIS

Statistical techniques used were Pearson productmoment correlation (r), one-way analysis of variance for

unequal numbers of subjects followed by Duncan's New Multiple Range Test (Winer, 1962), and factor analysis by the principal component method with reference axes rotated orthogonally (Harman, 1967).

Tests of significance were made at the .05 and .01 levels for correlation coefficients and F values, while the .01 level only was adopted for Duncan's New Multiple Range Tests. Factors were interpreted by utilizing variables which had factor loadings of at least .45.

CHAPTER IV

CHARACTERISTICS OF THE RESPONDENTS

A background for the analysis and interpretation of the data relating specifically to the wife's decision-making role is established by a detailed description of the respondents, with particular reference to the predictor variables.

INFORMATION-SEEKING ACTIVITY

Three aspects of the wife's overall farm informationseeking activity were investigated--her attendance at agricultural meetings, field days, and short courses; her use of information sources in farm decision-making, and the transmitting of agricultural information within the family.

Wives' attendance at meetings, field days, and short courses was low, with only seven wives (10.4 per cent) indicating that they had attended a total of fifteen such events during the past two years. Three wives (4.5 per cent) had been to meetings of the Lower Mainland Horticultural Improvement Association, and three had attended the Association's annual two-day Growers' Short Course. Strawberry Field Day, sponsored annually by the Agricultural Extension Service, had been attended by six of the respondents (9 per cent).

The wife's use of information sources in farm decision-making was not particularly widespread, although about one-third of the wives (34.4 per cent) reported drawing upon

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such sources when confronted with decisions relating directly to farm operations and resources. The mean number of sources named by these respondents was 2.0. Information-seeking related specifically to decisions concerning the six agricultural innovations investigated was not as extensive. Only fourteen wives (20.9 per cent) reported such activity, and indicated consulting an average of 1.5 information sources per innovation.

For both general farm and adoption decision-making, wives tended to rely mostly on sources of a personal nature, such as friends, neighbors, relatives, or their own experience. (Table 1) The use of personal sources in making decisions about general farm matters was reported by 34.3 per cent of the respondents, while 16.4 per cent used such sources in decisions relating to adoption. Information originating from government sources, namely the Agricultural Extension Service,

	General	decisions	Adoption	decisions
Origin ^a	Use %	Non-use %	Use %	Non-use %
Government	20.9	79.1	13.4	86.6
Commercial	10.4	89.6	1.5	98.5
Farm organizations	3.0	97.0	3.0	97.0
Personal	34.3	65.7	16.4	83.6

TABLE 1

INFORMATION SOURCES IN DECISION-MAKING: CLASSIFIED BY ORIGIN AND BY WIVES' USE AND NON-USE

a Categories according to Verner and Gubbels (1967).

was used by 20.9 per cent of the wives in general farm decision-making and by 13.4 per cent in adoption decision-making. Relatively little use was reported of information from commercial sources or from farm organizations.

The transmitting of agricultural information within the family was explored generally in four items, with the responses "never," "seldom," "occasionally," "frequently," and "very frequently" assigned weights from 0 to 4.

The highest mean weight (1.6) was recorded for the wife's overall communication of agricultural information to her husband ("Do you ever tell your husband something you have read or heard about agricultural matters?"). (Table 2) Considerably lower weights were recorded for the other three items: "Does your husband ever bring home agricultural publications for you to read?" (.5); "Do you ever bring home agricultural publications for him to read?" (.7); and "When your husband is considering a new farm practice do you yourself try and find out about it?" (.8).

The index providing an overall measure of the wife's information-seeking activity combined all aspects of information-seeking investigated: the number of meetings, field days, and short courses attended; the number of sources of information used in farm decision-making; and the weights recorded for the information transmittal items.

Although none of the behaviors had been particularly widespread when examined individually, total scores on the information-seeking index, ranging from 0 to 31, reflected

TABLE 2

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PERCENTAGE DISTRIBUTION OF WIVES BY RESPONSES TO

INFORMATION TRANSMITTAL ITEMS

Item	Never (x0)	Seldom (xl)	Occas- ionally (x2)	Fre- quently (x3)	Very fre- quently (x4)	Mean ^a
Husband brings home publications on agricul- tural matters for wife to read	. 71.7	4.5	13.4	7.5	3.0	•7
Wife brings home publications on agricul- tural matters for husband to read	. 76.1	4.5	11.9	4.5	3.0	•5
Wife tells husband what she has read or heard about agricultural matters	. 29.9	14.9	34.3	10.5	10.5	1.6
Wife tries to find out about new practice husband is considering	. 64.2	9.0	13.4	9.0	4.5	.8

^a The mean for each row was calculated on the basis of the weights shown--"never" = 0, "seldom" = 1, and so on.

considerable variation among respondents. The mean score was 7.87, skewed positively, with 22.4 per cent of the wives reporting no information-seeking activity at all.

Item-total correlations for the information-seeking index indicate that all aspects of activity studied (with the exception of meetings attended) were significantly related to the total score (Table 3). The original communality for the total score (.99) suggests high reliability. Assuming that each individual item is a face valid measure of information-seeking activity, the inter-item correlations indicate that the index has considerable validity.

Information-seeking scores were positively associated at the .01 level of significance with the wife's Extension contact (r = .36) and her participation in farm tasks (r = .32).

EXTENSION CONTACT

Wives' contacts with the Agricultural Extension Service, considered as a separate type of information-seeking activity, tended to be relatively low. Although a mean of 3.85 was recorded for the number of contacts during the previous year, 53.7 per cent of the wives reported no contact whatsoever.

All of the contacts were with local District Horticulturists, who specialize in crops such as strawberries and other small fruits. None of the respondents reported contacts with the local District Agriculturists, who are concerned with general farming.

TABLE 3

INFORMATION-SEEKING INDEX: INTERCORRELATIONS AMONG ITEMS^a

Ite	m 1	2	3	4	5	6	7	8
1.	Husband brings home publications on agricul- tural matters for wife to read							
2.	Wife brings home publications on agricul- tural matters for husband to read	•37			.05			
3.	Wife tells husband what she has read or heard about agricultural matters	•44	•47		.01 level = .31			
4.	Wife tries to find out about new practice husband is considering	•34	.63	•76				}
5.	Number of agricultural meetings, field days, and short courses attended	01	•09	.00	.03			
6.	Number of sources of information used in general decision-making	• ¹ 44	•57	.85	•00	•78		
7.	Number of sources of information used in adoption decision-making	•37	•47	.62	.10	.68	•49	
8.	Total	.63	•73	.81	.15	.84	. 86	· •99

^a Original communalities are reported in the principal diagonal. These are included as estimates of reliability.

TABLE 4

EXTENSION CONTACTS: CLASSIFIED BY TYPE

AND BY USE AND NON-USE

	W	lves	Hus	bands ^b
Type of contact ^a	Use %	Non-use %	Use %	Non-use %
Meetings, field days spon- sored by agent	• 7•5	92.5		
Visits to the farm by the agent	. 3.0	97.0	64.2	35.8
Visit to the agent's office	. 6.0	94.0	44.8	55 .2
Telephone calls to the agent • • • • • • • • • • •	20.9	79.1	71.6	28.4
Radio or television pro- grams given by agent	20.9	79.1	70.2	29.8
Newspaper articles written by agent	22.4	77.6	82.1	17.9
Circular letters or bulle- tins from agent	32.8	67.2	85.1	14.9

^a Categories according to Rogers and Capener (1960).
^b Data provided by Alleyne and Verner (1969b), who did not include a category relating to meetings or field days.

The wives tended to rely on impersonal types of contact, with the heaviest use reported for circular letters or bulletins (32.8 per cent), newspaper articles (22.4 per cent), and radio or television programs (20.9 per cent). (Table 4) The extent of personal contact was considerably lower, although 20.9 per cent of the wives had made telephone calls to the agent's office.

The pattern noted was similar to that exhibited by the respondents' husbands--although the husbands reported more extensive use of all types of contact, they too drew mostly on impersonal sources.

The wife's Extension contact was positively associated with her overall information-seeking activity (r = .36), her involvement in farm tasks (r = .27), her social participation (r = .30), and her husband's adoption score (r = .34). (.05 level = .24; .01 level = .31)

TASK INVOLVEMENT

The twelve farm tasks studied related to the farm business in general and strawberry production in particular.

The mean weights for each task item, reflecting the extent of the wife's participation relative to her husband's, ranged from 2.4 to 4.4, where a weight of 2 equals "husband only" and 4 represents "husband and wife about equally." (Table 5)

Tasks specific to strawberry production had the highest mean weights: hand weeding (4.4), removing blossoms (4.2), setting runners (4.1), supervising pickers (4.1), recruiting pickers (3.8), and planting berries (3.8).

Somewhat lower weights were recorded for the five items concerning the handling of finances, such as writing checks (3.6), paying pickers (3.6), paying bills (3.5), completing income tax forms (3.5), and keeping farm accounts (3.4). Working with farm machinery was the sole responsibility of the husbands in a substantial majority of the families, resulting in the lowest mean weight (2.4) for that item.

TABLE 5

TASK INVOLVEMENT: PERCENTAGE DISTRIBUTION OF WIVES BY EXTENT OF INVOLVEMENT IN EACH FARM TASK

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Task	Neither spouse	Husband only (x2)	Husband more (x3)	About equally (x4)	Wife more (x5)	Wife only (x6)	Mean ^a
Recruits pickers	13.4	19.4	6.0	41.8	7.5	12.0	3.8
Keeps farm accounts	9.0	46.3	10.5	7.5	1.5	25.4	3.4
Pays bills	3.0	44.8	7.5	17.9	7.5	19.4	3.5
Works with farm machinery	6.0	67.2	16.4	7.5	1.5	1.5	2.4
Completes income tax forms	55.2	25.4	3.0	1.5		14.9	3.5
Pays pickers	6.0	44.8	-	20,9	4.5	23.9	3.6
Plants berries	20.9	16.4	4.5	43.3	6.0	9.0	3.8
Does hand weeding	17.9	11.9	1.5	32.8	11.9	23.9	4.4
Sets runners between rows	22.4	17.9	1.5	31.3	10.5	16.4	4.1
Removes blossoms	35.8	11.9	1.5	29.9	4.5	16.4	4.2
Writes checks	4.5	32.8	9.0	34.3	7.5	11.9	3.6
Supervises pickers	19.4	22.4	6.0	19.4	7.5	25.4	4.1

^a The mean for each row was calculated on the basis of the weights shown--"husband only" = 2, "husband more" = 3, and so on.

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TASK INVOLVEMENT INDEX: INTERCORRELATIONS AMONG ITEMS³

Ta:	sk	1	2	3	4	5	6	7	8	9	10	11	12	13
1.	Recruits pickers	.46												<u></u>
2.	Keeps farm accounts	.24	•76							•05	level	= .24		
3.	Pays bills	.25	.83	.84						.01 level = .31				
4.	Works with farm machinery	.23	•03	•13	.21									
5.	Completes income tax forms	.19	•59	•56	.15	•52								
6.	Pays pickers	.45	•64	•72	.22	•40	.63							
7.	Plants berries	.12	.08	.10	.28	.25	.02	•40						
8.	Does hand weeding	.13	•06	•05	.20	.27	.08	•54	.67					
9.	Sets runners between rows	.12	.12	.02	.18	.24	•04	•39	•74	•69				
10.	Removes blossoms	.27	.18	.10	.21	•39	.15	.23	.63	.71	.63			
n.	Writes checks	•33	•59	•76	.21	.50	•58	.07	.01	.03	.15	•65		
12.	Supervises pickers	•57	.13	.17	•31	•32	•30	.19	•30	•36	•40	•35	.51	
13.	Total	•53	.60	.60	•39	.68	.60	.48	.62	.62	.68	•58	,62	•99

^a Original communalities are reported in the principal diagonal. These are included as estimates of reliability. Each of the task items was positively correlated at the .01 level of significance with total scores on the task involvement index, and the original communality for the total score (.99) indicates a high estimate of reliability. (Table 6) Assuming that each item is a face valid measure of task involvement, the inter-item correlations suggest considerable evidence of the index's validity.

The wife's overall participation in farm tasks was positively associated with her information-seeking activity (r = .32) and her Extension contact (r = .27), and negatively associated with income (r = -.43), size of farm (r = -.42), and the number of children in the family (r = -.24). (.05 level = .24; .01 level = .31)

INCOME, SIZE OF FARM

Although small fruit production was the major enterprise of 85 per cent of the families, most had other agricultural operations as well, including vegetables (22.4 per cent), livestock (13.4 per cent), dairy (11.9 per cent), and poultry (4.5 per cent).

Gross agricultural income from all operations averaged \$33,494, and the mean size of farm was 63.66 acres. (Table 7) Distributions for both variables were definitely and positively skewed, however. More than half of the respondents (55.2 per cent) reported incomes of less than \$10,000, and more than half (53.7 per cent) had holdings of fewer than 15 acres.

TABLE 7

MEANS AND STANDARD DEVIATIONS

FOR ALL PREDICTOR VARIABLES AND FOR ALL RESPONDENTS^a

Variable	Mean	S.D.
Information-seeking	7.87	8.72
Extension contact	3.85	6.27
Task involvement	36.27	13.31
Income	33,494.00	60,892.70
Size of farm	63.66	133.05
Agehusband	53.52	11.03
Agewife	48.78	9.63
Educationhusband	8.43	3.14
Educationwife	8.84	3.42
Social participation	9.69	11.54
Number of children	3.91	2,22
Husband's adoption score	26.15	3.17

^a Percentage distributions for all predictor variables are reported in Appendix A.

As might be expected, income and farm size were highly correlated (r = .91), with parallel patterns of relationships with other variables. Each was positively associated with the husband's adoption score (r = .29 for income and .24 for farm size) and the educational levels of both husband (r = .30 and .36) and wife (r = .46 and .39). Negatively related to both income (r = -.43) and farm size (r = -.42) was the wife's involvement in farm tasks. (.05 level = .24; .01 level = .31)

AGE, EDUCATION, AND SOCIAL PARTICIPATION

The couples tended to be middle-aged or older--none of the husbands or wives were under 25 years of age, while more than one-third were 55 or more. Mean ages were 53.52 for husbands and 48.78 for wives.

Both husbands and wives had completed an average of about eight years in school. Eight wives (11.9 per cent) and nine husbands (13.4 per cent) were functionally illiterate, having less than five years of schooling. At the other extreme, more wives (26.9 per cent) than husbands (12 per cent) had completed grade twelve. Although none had received a degree, five husbands and five wives had attended university.

The wife's level of social participation, as measured by the Chapin Index (Chapin, 1955), was relatively low. Scores of less than 15 were recorded for 79.1 per cent of the respondents, and 22.4 per cent reported no social participation at all. The wives' mean score of 9.69 was considerably lower than the mean of 13.64 recorded for their husbands by Alleyne and Verner (1969a).

Husbands' and wives' educational levels were positively correlated with income (r = .30 for husbands and .46 for wives) and farm size (r = .36 for husbands and .39 for wives). The wife's social participation was positively associated with her Extension contact (r = .30) and negatively associated with her age (r = -.37). Age was also negatively related to the husbands' adoption scores (r = -.45 for husbands and -.44 for wives). (.05 level = .24; .01 level = .31).

The mean number of children per family was 3.91. Only three couples were childless.

Family size was negatively associated with the wife's participation in farm tasks at the .05 level of significance (r = -.24), but was not related to any of the socioeconomic variables, such as income, size of farm, age, education, and social participation.

HUSBAND'S ADOPTION SCORE

The husbands' acceptance of technological change, indicated by their self-reported progress towards the adoption of six agricultural innovations in strawberry production (Alleyne and Verner, 1969a), was relatively high.

The innovations investigated were: (a) virus-free certified plants; (b) picking carts; (c) chemical weed control; (d) soil analysis for nematode control; (e) Captan for fruit-rot control; and (f) the use of matted rows instead of hills as an in-field layout system.

Maximum adoption scores of 30, indicating acceptance of all six practices, were recorded for 20.9 per cent of the operators. The mean score for all 67 respondents was 26.15.

Husbands adopting all six innovations had been classified as "innovators/early adopters" by Alleyne and Verner (1969a), who subdivided their sample of 100 growers into four adopter categories. Forty per cent of the husbands had been included in Alleyne and Verner's "early majority" category, while 31.3 per cent were described as "late majority" and 7.5 per cent as "laggards."

Adoption scores were positively associated at the .05 level of significance with farm size (r = .24) and income (r = .29), consistent with Rogers and Shoemaker's (1971) generalizations that earlier adopters have larger farms and a more favorable financial position than do later adopters.

The wife's Extension contact was positively related to the husband's adoption score at the .01 level of significance (r = .34), while age was negatively related (r = -.45for husbands and -.44 for wives).

CHAPTER V

THE WIFE'S FARM DECISION-MAKING ROLE

The exploration of the data relating to the wife's farm decision-making role is twofold. The wife's involvement in decision-making relative to that of her husband is first examined, with attention to the nature and content of the individual decision items. The analysis then focuses on the predictor variables hypothesized to be associated with the extent of the wife's participation in decisions concerning general farm matters and decisions leading to the adoption of specific agricultural innovations.

INVOLVEMENT IN FARM DECISIONS

The farm decisions studied were selected to reflect a variety of decision areas, although they were thought to be representative of decisions likely to be encountered by farm families and likely to have been considered recently.

While the general farm decision items provide an indication of the wife's relative involvement in overall management aspects of the farm enterprise, the adoption decision items permit a close look at her involvement in a particular type of decision, as well as in various stages of the adoption process.

General Farm Decisions

The twelve decisions dealing with general farm operations and resources represent ongoing concerns. Some decisions relate to routine matters, while others involve major changes in the farm enterprise or large outlays of financial resources. None of the items specifically concerns strawberry production since issues thought to be relevant to farm families in general are examined instead.

The husband, not surprisingly, appeared as the dominant partner in all of the decisions studied (Table 8). The mean weights for each decision item, reflecting the extent of the wife's involvement, ranged from 2.2 to 3.7, where a weight of 2 is equivalent to "husband only" and 4 represents "husband and wife about equally."

Considerable evidence of joint decision-making is apparent, however, for those decisions which can be seen as relatively important. Borrowing money for the farm, buying or renting more land, and switching to a new crop were equal concerns of the husband and wife in about 70 per cent of the families, with the highest mean weights (3.6 and 3.7) recorded for these decisions. Issues relating generally to the acceptance of technological changes (whether to try a new farm practice) were considered equally by both partners in more than half of the families (mean weight = 3.4).

The least joint involvement occurred in decisions of a more or less minor or specific nature, such as what make of machinery to buy, what kind of fertilizer to use, and whether to attend an agricultural meeting (mean weights = 2.2 and 2.4).

TABLE 8GENERAL DECISION-MAKING:PERCENTAGE DISTRIBUTION OF WIVESBY EXTENT OF INVOLVEMENT IN EACH DECISION

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Decision	Never consid- ered	Husband only (x2)	Husband more (x3)	About equally (x4)	Wife more (x5)	Wife only (x6)	Mean ^a
Whether to try a new crop variety		22.4	26.9	46.3	4.5		3.3
Whether to buy or rent more land	. 1.5	11.9	14.9	70.2	1.5		3.6
for the farm	. 3.0	10.5	16.4	68.7	1.5		3.6
Whether to buy major farm equipment	• 3.0	35.8	28.4	31.3	1,5		3.0
equipment to buy	. 1.5	86.6	9.0	3.0	-		2.2
What kind of fertilizer to use		76.1	10.5	10.5	1.5	1.5	2.4
cultural meeting	• 4.5	79.1	6.0	1.5	7.5	1.5	2.4
a farm publication	• 4•5	70.2	10.5	6.0	7.5	1.5	2.5
to hire	. 1.5	26.9	16.4	41.8	9.0	4.5	3.5
Whether to try a new farm practice		22.4	17.9	53.7	6.0		3.4
whether to increase or de- crease crop acreage		13.4	20.9	61.2	4.5		3. 5
new crop		10.5	16.4	68.7	4.5		3.7

^a The mean for each row was calculated on the basis of the weights shown--"husband only" = 2, "husband more" = 3, and so on.

TABLE	9
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GENERAL DECISION-MAKING INDEX: INTERCORRELATIONS AMONG ITEMS²

Dec	ision	1	2	3	4	5	6	7	8	9	10	11	12	13
1.	Whether to try a new	/ =												
~	crop variety	•65												
2.	whether to buy or rent	E)	00							05	ا میرم آ	- 24		
2	More Lang	• 54	• ((•05	TAVAT	- • <i>L</i> .4		
•د	for the form	48	77	67						.01	lovel	= 31		
h	Whether to hur major	•40	• ((•07						•01	TOACT	- •)1		
44.4	farm equipment	20	. 50	47	43									
5	What specific make of	•~7	•)0	• • (•••									
•ر	equipment to buy	.11	.12	.12	.35	.31								
6.	What kind of fertilizer		•		•))	• / -								
0.	to use	.40	.26	.26	.14	.40	.49							
7.	Whether to attend an ag-	-					·							
• •	ricultural meeting	.40	.25	.25	.27	.23	.51	.86						
8.	Whether to subscribe to		-	-			-							
	a farm publication	•37	.20	.21	.22	.22	•45	.91	. 86					
9.	How many farm workers													
-	to hire	•43	.40	•35	.22	.29	•51	.44	.48	•51				
10.	Whether to try a new		_							_				
	farm practice	•71	•58	•51	•41	.19	•44	•44	.41	.61	•78			
11.	Whether to increase or de-						• .	_		_				
	crease crop acreage	•57	•72	•49	•47	.16	•43	•39	•34	•53	•78	. 84		
12.	Whether to switch to a										1.			
	$new crop \dots \dots \dots \dots \dots \dots \dots$	•67	•72	•59	•43	•13	•39	•37	•38	. 46	•63	•79	•77	
13.	Total	.71	.72	.67	•59	•36	.61	.71	.68	.71	.81	•79	.77	•99

^a Original communalities are reported in the principal diagonal. These are included as estimates of reliability. Similar patterns have been noted by other investigators, who have found that decisions involving major changes or commitments of financial resources seem to be made jointly in most families, while minor or routine decisions appear to be made mostly by the husband alone (Abell, 1961; Ross and Bostian, 1965; Royal Commission on Agriculture and Rural Life, 1956; Slocum and Brough, 1962).

The couples had encountered nearly all of the decisions investigated. At most, only about 5 per cent of the wives indicated that an individual decision item had never been considered in their families.

Correlations between the individual items and total scores on the general decision-making index (Table 9) indicate internal consistency, while the original communality for the total score (.99) suggests high reliability. Assuming that each separate item is a face valid measure of decision-making, the inter-item correlations indicate that the general decisionmaking index has considerable validity.

Adoption Decisions

The adoption decisions studied concern six agricultural innovations in strawberry production. The wife's participation was considered at each of the five traditional stages in the adoption process--awareness, interest, evaluation, trial, and adoption--plus a sixth stage, discontinuance.

As noted for general farm decisions, the husband obviously assumes the major role in decisions leading to adoption.

Mean weights, indicating the extent of the wife's involvement at each stage, ranged from 1.8 to 8.8, where "husband only" equals 0, and "husband more than wife" equals 10. (Table 10)

The husband's influence is particularly noticeable at the awareness and interest stages (weights of 1.8 to 3.9). Although there is no marked tendency for wives to be involved with one innovation more than another, their participation becomes more apparent at the evaluation stage and increases through trial and adoption (weights 6.4 to 8.8).

These findings perhaps parallel those for general farm decisions, where joint decision-making was most evident for major concerns. The final decision to adopt may involve a large commitment of financial resources or changes in the structure of the farm business. As the adoption decisionmaking process progresses and the final decision nears, the extent of the wife's interest in the outcome may increase. In the early stages of the process, however, her husband is likely in a better position to become aware of the innovation in the first place and to collect information about its application to his particular farm situation.

Since adoption takes place over time, it was not expected that every family would have made decisions corresponding to all stages for each innovation. While the use of virus-free certified plants was widespread, with only 3 per cent of the wives reporting non-adoption, more than half indicated that decisions to adopt picking carts had not been encountered. There were no instances reported where innovations, once adopted, were subsequently discontinued.

1

Adoption stage	Never consid- ered	Don¶t know	Husband only (x. 0)	Husband more (x10)	About equally (x20)	Wife more (x30)	Wife only (x40)	Mean ^A
		Soil an	alysis for	nematode c	ontrol			
Awareness	3.0		89.6	· ==	1.5		6.0	2.8
Interest	4.5		77.6	7.5	1.5	9.0		3.9
Evaluation	9.0		41.8	37.3	7.5	4.5		7.2
Trial	32.8		29.9	32.8	3.0	1.5		6.4
Adoption	28.4		26.9	31.3	9.0	4.5		8.8
		Spraying w	ith Captan	for fruit-	rot control			
Awareness	1.5		94.0				4.5	1.8
Interest	1.5		79.1	11.9	1.5	6.0		3.2
Evaluation	1.5	~-	43.3	46.3	4.5	4.5		.7.0
Trial	7.5	1.5	40.3	41.8	9.0	1.5		7.0
Adoption	7.5	1.5	38.8	41.8	9.0	3.0		7.4
-		Using "ma	tted rows"	instead of	"hills"			
Awareness		1.5	92.5		1.5		4.5	2.1
Interest		1.5	77.6	13.4	1.5	6.0		3.5
Evaluation	1.5	~~	41.8	47.8	6.0	3.0		7.0
Trial	10.4		35.8	44.8	9.0			7.0
Adoption	13.4	~	32.8	40.3	.9.0	4.5		8.3
			Chemical we	ed control				
Awareness		1,5	94.0				4.5	1,8
Interest	1.5	1.5	77.6	10.4	3.0	6.0		3.5
Evaluation	6.0	~-	38.8	46.3	4.5	4.5		7.3
Trial	16.4	~-	34.3	40.3	6.0	3.0		7.3
Adoption	16.4		34.3	38.8	10.4			7.1
			Using pick	ing carts				
Awareness		3.0	82.1	7.5	1.5	6.0	3.0	3.1
Interest	7.5		76.1	10.5	1.5	4.5		2.9
Evaluation	10.5		38.8	38.8	6.0	6.0	 .	7.7
Trial	46.3		22.4	20.9	9.0	1.5	,	8.0
Adoption	55.2		17.9	17.9	7.5	1.5	6 74 may	.8.3
		Using	virus-free	certified	plants			
Awareness		1.5	94.0				4.5	1.8
Interest			82.1	10.5	1.5	6.0		.3.1
Evaluation			46.3	44.8	6.0	3.0		6.6
Trial	3.0		43.3	44.8	7.5	1.5		6.6
Adoption	3.0		38.8	46.3	9.0	3.0		7.5

TABLE 10 ADOPTION DECISION-MAKING: PERCENTAGE DISTRIBUTION OF WIVES BY EXTENT OF INVOLVEMENT AT EACH ADOPTION STAGE

^a The mean for each row was calculated on the basis of the weights shown--"husband only" = 0, "husband more" = 10, and so on.

Decision		 1	2		 /L	<u> </u>		
			~~~~~					
1.	Soil analysis for nematode control	.82						
2.	Spraying with Captan for fruit-rot control	•84	<b>•9</b> 8		.05 level = .24			
3.	Using "matted rows" instead of "hills"	•87	•93	•93	.01 level = .31			
4.	Chemical weed control	•85	•97	.89	•96			
5.	Using picking carts	.86	.87	.91	•86	<b>.</b> 85		
6.	Using virus-free certified plants	.83	•99	•93	•97	.87	•98	
7.	Total	.92	•98	•96	•97	•94	•97	•99

## TABLE 11

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# ADOPTION DECISION-MAKING INDEX: INTERCORRELATIONS AMONG ITEM SUBTOTALS⁸

^a Original communalities are reported in the principal diagonal. These are included as estimates of reliability.

The correlations between the subtotals for each innovation (calculated by averaging each wife's accumulated weights over the number of stages at which decisions had been made) and the total scores for the adoption decision-making index indicate evidence of internal consistency. (Table 11) High estimates of reliability are expressed by the original communalities, ranging from .82 to .99. Assuming that each individual item is a face valid measure of decision-making, the high inter-item correlations suggest that the entire index is also valid.

Although variations in methodology do not permit a direct comparison of the wife's involvement in general farm decisions with her participation in adoption decisions, the husband appears to be the dominant partner in both types of decision-making.

#### PREDICTORS OF DECISION-MAKING INVOLVEMENT

Analyses of family decision-making patterns can be approached from two perspectives--by considering variations within families or variations between families. Since husbands might be expected to have the major responsibility for farm decision-making within the family (an expectation supported by responses to the individual decision items), the analysis for this study was designed to focus on the presumably more interesting aspects of between-family variations.

Between-family variations occur because in some families the husband and wife consistently decide together and

in other families the husband consistently decides alone. These variations are reflected when the responses to the individual decision items are combined into total scores for the general and adoption decision-making indices.

The emphasis then shifts from each wife's involvement in decision-making relative to her husband (within-family) to her involvement relative to that of other wives (betweenfamilies). Such a shift invites an examination of the variables hypothesized to be associated with the extent of the wife's participation in farm decisions.

The hypotheses, advanced at the beginning of the study and restated here, predicted directional relationships:

1. The wife's seeking of information about farm matters in general, and her contact with the Agricultural Extension Service in particular, is positively associated with her involvement in farm decision-making.

2. The wife's participation in farm tasks is positively associated with her participation in farm decisions.

3. Indicators of socioeconomic status--such as income, size of farm, education, and the wife's social participation--are negatively associated with the wife's involvement in farm decision-making, while age is positively associated.

4. The number of children in the family is negatively associated with the wife's participation in decisions pertaining to farm matters.

5. The husband's adoption of agricultural innovations is negatively associated with his wife's involvement in decisions about those innovations and about farm matters in general. The hypothesized relationships were explored in two ways: (a) total scores on the general and adoption decisionmaking indices were each correlated with each predictor variable to provide indications of the strength and direction of relationships, and (b) one-way analyses of variance of low, middle, and high general and adoption decision-making groups, followed by Duncan's New Multiple Range Tests, were conducted for each predictor variable to check for significant nonlinear associations.

For the one-way analyses of variance, the wives were sorted into low, middle, and high groups according to natural groupings in the distributions of raw scores for each index (Figures 1 and 2).

Wives did not necessarily sort into the same groups on each measure, although the correlation between the two indices (r = .74) was significant at the .01 level. For general decision-making twenty-six wives were assigned to the low group, twenty-eight to the middle group, and thirteen to the high group. For adoption decision-making there were twenty-three lows, thirty-two middles, and twelve highs.

The low general group included five wives who reported no involvement in general farm decisions (a score of 24 is equivalent to 0 since "husband only" responses had a weight of 2), while all twenty-three wives in the low adoption decision-making group reported no involvement in any of the adoption decisions.







Tests were made at the .05 and .01 levels of significance for correlation coefficients and F values, while the .01 level only was utilized for Duncan's New Multiple Range Tests.

## Information-Seeking, Extension Contact

The positive relationship predicted between the wife's overall farm information-seeking activity and her participation in farm decisions was supported for both general (r = .55) and adoption (r = .77) decision-making. (Table 12) Reinforcing the findings were highly significant F values ( $p = \langle .001 \rangle$ ) revealed in analyses of variance of the low, middle, and high decision-making groups. For both decision-making measures, the high groups were significantly differentiated from the low and middle groups.

However, the wife's contact with the Agricultural Extension Service--considered as a specific type of informationseeking activity--was not significantly associated with her involvement in either general farm decisions (r = .16) or decisions leading to adoption (r = .22). The corresponding F values were also low (p = .410 for general decisions and p = .097 for adoption decisions).

Wives who are involved in seeking information about farm business matters therefore appear likely to participate in decisions about those matters, although information-seeking activity related particularly to the Agricultural Extension Service does not seem to be associated with the extent of her participation.
#### Task Involvement

Wives who were active in farm work roles were also active in farm decision-making roles. Scores for task involvement correlated positively with those for participation in both general (r = .49) and adoption (r = .42) decisions, and the relationships were in the direction hypothesized.

Supporting the findings were significant F values (p = .005 for general decisions and p = .001 for adoption decisions), with high and low groups differentiated on each measure.

#### Income, Size of Farm

Two indicators of socioeconomic level--income and size of farm--were associated with the wife's participation in decision-making.

Gross agricultural income correlated negatively with involvement in both general (r = -.48) and adoption (r = -.28) decisions. F values for both decision-making measures were significant (p = .002), with low decision-making groups differentiated from both the high and middle groups.

A similar pattern emerged when size of farm was considered. Total acreage was negatively associated with participation in both general (r = -.45) and adoption (r = -.26) decision-making, and the corresponding F values were also significant (p = .003 and .007). High and low decisionmaking groups were differentiated for each measure.

		General de	ecision-ma	aking .	A	doption (	decision-	-making
Variable	r ^a	F ^b	Fprob	DNMRTC	r ^a	Fb	Fprob	DNMRTC
Information-seeking	•55	12.53	<.001	<u>L M</u> H	•77	48.54	<b>&lt;.</b> 00 <u>1</u>	<u>L M</u> H
Task involvement	•49	5.79	.005	<u>L M H</u>	.42	8.88	.001	<u>L M</u> H
Income	48	6.91	.002	<u>H M</u> L	28	7.03	.002	<u>H M</u> L
Size of farm	45	6.66	.003	<u>H M L</u>	26	5.45	.007	<u>H_M_L</u>
Number of children ^d	32	2.86	.063		28	2.21	.116	
Social participation	08	.22	.804		03	3.02	.055	MLH
Extension contact	.16	•91	.410		.22	2.40	.097	· · · · · · · · · · · · · · · · · · ·
Educationhusband	.05	.00	•996		.22	1.35	.266	
Educationwife	14	1.03	•364		•00	2.57	.083	
Agehusband	.11	.61	•552		.13	.02	•968	
Agewife	.10	•36	•704		.09	.03	•959	
Husband's adoption score	14	•25	.782		.07	1.89	.157	

TABLE 12 PREDICTORS OF DECISION-MAKING INVOLVEMENT: SUMMARY OF ANALYSIS

a .05 level = .24; .01 level = .31; two-tailed. b Variance source tables are presented in Appendix C. c For Duncan's New Multiple Range Tests, L, M, and H represent low, middle, and high decision-making groups arranged in ascending order according to their means. Means of groups not underscored by a common line differ significantly (p < .01). d t = -2.67, df = 33, p = .011 for general decision-making; t = -2.13, df = 30, p = .039 for adoption

decision-making; (high-low group comparison).

The negative direction of the relationships was consistent with the hypothesis, indicating that wives who tend to be involved in farm decision-making tend to live on relatively small farms with small incomes.

#### Age, Education, Social Participation

Not significantly associated with the wife's participation in either general farm decisions or specific adoption decisions were the husband's and wife's education and age, and the wife's social participation.

While the correlations and F values tended to be quite low, two exceptions should be noted. The F value for the wife's social participation and adoption decision-making revealed a nearly significant (p = .055) nonlinear relationship, and the husband's education moderately correlated with adoption decision-making scores (r = .22).

Hypothesized relationships for these variables were considered as not supported since they failed to reach the .05 level of significance.

#### Number of Children

The number of children in the family, as predicted, was negatively associated with the wife's involvement in both general (r = -.32) and adoption (r = -.28) decisions. Although the corresponding F values were not high, t-tests restricted to high-low group comparisons yielded significant values for both decision-making measures (p = .011 for general decisions and p = .039 for adoption decisions).

#### Husband's Adoption Score

The husband's adoption of agricultural innovations was not associated with either his wife's involvement in decisions about those innovations or her participation in decisions about farm matters in general.

Husbands' adoption scores, based on progress towards the adoption of six practices, yielded essentially no correlation (r = .07) with their wives' reported involvement in decisions concerning the adoption of those practices. Similarly, wives' participation in general farm decisions was not associated with the husbands' adoption behavior (r = -.14).

#### Interrelationships Among Variables

Parallel relationships obviously emerged for participation in general farm decisions and participation in adoption decisions--predictor variables significantly associated with one decision-making measure were similarly associated with the other.

All of the relationships were in the directions hypothesized:

1. The wife's farm information-seeking activity and her involvement in farm tasks were positively associated with her participation in both general farm decisions and decisions leading to adoption.

2. Income, size of farm, and the number of children in the family were negatively associated with her involvement in both types of decisions.

TABLE	13
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INTERCORRELATIONS AMONG ALL VARIABLES^a

Var	iable	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1.	General decision-making	.67													
2.	Adoption decision-making	•74	.78								•0	5 leve	$1 = .2^{1}$	ł	
3.	Information-seeking	•55	•77	.68							•01	l level	1 = .3	L	
4.	Task involvement	.49	.42	.32	•45										
5.	Income	-,48	<b></b> 28	10	43	.88									
6.	Size of farm	45	26	13	42	•91	.87								
7.	Number of children	32	28	13	24	•09	•06	.29							
8.	Social participation	08	03	.11	.18	.20	.13	06	•35						
9.	Extension contact	.16	.22	•36	.27	.01	.06	01	•30	•32					
10.	Educationhusband	•05	.22	.20	.05	•30	•36	21	•31	.20	•46				
υ.	Educationwife	14	.00	.17	•00	•46	•39	10	.21	.13	•51	•50			
12.	Agehusband	.11	.13	.02	.02	17	20	.20	32	23	-,22	18	•84		
13.	Agewife	.10	•09	03	02	19	18	.20	37	23	25	-,31	•90	•84	•
14.	Husband's adoption score	14	.07	.16	•08	.29	.24	.12	•19	•34	.22	.22	45	44	.46

^a Original communalities are reported in the principal diagonal. These are included as estimates of reliability.

Interesting patterns of relationships were revealed when the intercorrelations among the decision-making scores and the variables significantly associated with them were examined (variables 1-7 in Table 13).

The four variables relating to the wife's farm activities--her participation in decision-making, informationseeking, and tasks--were positively intercorrelated at the .01 level of significance. Each was negatively associated with income, size of farm, and the number of children in the family, although the relationships did not reach the .05 level for information-seeking. Family size was not related to income, size of farm, or any of the other socioeconomic variables.

To further examine interrelationships and determine possible common sources of variance, all fourteen variables in the correlation matrix were factor-analyzed by the principal component method.

Three factors were extracted, accounting for 54.0 per cent of the total variance. When a stringent lower limit of .45 is enforced for rotated factor loadings, all variables but three (Extension contact, number of children, and social participation) are represented in the factor structure (Table 14). When the lower limit is extended downward to .30, all variables but number of children (with a borderline loading of .29) are included.

The wife's farm-related activities, clustered together in the correlation matrix, fell within Factor I, which

68.

### TABLE 14

### ROTATED FACTOR MATRIX FOR ALL VARIABLES

Factor name and	Rotated factor loadings						
definer variables	Factor I	Factor ]	I Factor	$\frac{11}{h^2}$			
Factor I <u>Wife's Business</u> Partner Role							
Adoption decision-making	<u>91</u>	11	03	.84			
General decision-making	<u>78</u>	09	.27	.69			
Information-seeking	<u>77</u>	.02	16	.62			
Task involvement	<b>-</b> • <u>55</u>	.12	.25	•38			
Extension contact	-• <u>34</u>	•30	14	.23			
Number of children	•29	17	03	.12			
Factor IIAge							
Agewife	02	94	.10	•89			
Agehusband	07	91	<b>.0</b> 6	.84			
Husband's adoption score	07	• <u>45</u>	28	.28			
Social participation	10	• <u>39</u>	20	.21			
Factor III <u>Socioeconomic St</u>	atus						
Income	• 34	.10	89	•92			
Size of farm	• 32	.10	<u>84</u>	.82			
Educationwife	09	.24	-• <u>54</u>	• 35			
Educationhusband	26	.26	49	• 37			
Percentage of common factor variance	37.7	31.3	31.0	$\xi h^2 = 54.0$			

^a Values have been reflected to facilitate interpretation.

accounted for 37.7 per cent of the common factor variance. Definer variables for Factor I, called <u>Wife's Business Part-</u> <u>ner Role</u> (non-involvement), concerned her participation in adoption decisions (-.91), general farm decisions (-.78), information-seeking (-.77), and farm tasks (-.55). Also included were Extension contact and number of children, although the loadings for these variables were relatively low.

Factor II, responsible for 31.3 per cent of the common factor variance, had heavy loadings on <u>Age</u> for both husbands (-.91) and wives (-.94). Husbands' adoption scores and social participation were not expressly part of any factor, but were most clearly associated with <u>Age</u>.

Factor III identified itself as <u>Socioeconomic Status</u> with high loadings on income (-.89), size of farm (-.84), and educational levels of both the husband (-.54) and wife (-.49). <u>Socioeconomic Status</u> accounted for 31.0 per cent of the common factor variance.

The three factors presumably underlie all the interrelationships among the fourteen variables in the correlation matrix, with the largest proportion of common factor variance accounted for by the <u>Wife's Business Partner Role</u>. The findings highlight the fact that <u>Age</u>, <u>Socioeconomic Status</u>, and <u>Wife's Business Partner Role</u> are relatively independent concepts, and that three concept areas suffice for a larger number of farm-relevant variables.

#### CHAPTER VI

#### CONCLUSIONS

The general purpose of the study was to investigate the farm wife's role in decision-making related directly to the farm business. Specifically examined were predictor variables hypothesized to be associated with the extent of the wife's involvement in decisions concerning general farm matters and decisions leading to the adoption of agricultural innovations.

The respondents were sixty-seven wives of commercial strawberry growers living in British Columbia's Lower Fraser Valley. Data were collected in personal interviews, and analyzed using Pearson product-moment correlation, one-way analyses of variance followed by Duncan's New Multiple Range Tests, and factor analysis by the principal component method.

Focusing on hypotheses developing from the five questions underlying the purpose of the study, the statistical analysis yielded the following findings:

1. Wives who seek information about farm matters are also likely to participate in decisions about those matters, although contact with the Agricultural Extension Service, considered as a specific type of information-seeking activity, does not appear to be associated with involvement in decisionmaking.

2. Wives who participate in farm tasks also tend to participate in farm decision-making.

3. Income and size of farm are negatively associated with the wife's involvement in farm decisions, while other indicators of socioeconomic status such as age, education, and social participation do not appear to affect the extent of her involvement.

4. The number of children in the family is negatively related to the wife's participation in decisions pertaining to the farm business.

5. The husband's acceptance of agricultural innovations is not associated with his wife's involvement in decisions about those innovations or with her participation in decisions about farm matters in general.

Three independent factors--labeled <u>Wife's Business</u> <u>Partner Role, Age</u>, and <u>Socioeconomic Status</u>--were reflected in the interrelationships among all variables. Defining the <u>Wife's Business Partner Role</u> were positively intercorrelated variables relating to the wife's involvement in farm decisionmaking, information-seeking, and tasks.

Interpretation of the findings is facilitated by the fact that parallel patterns of significant associations, consistent with the rationale developed for the hypotheses, emerged for the wife's involvement in general farm decisions and her participation in decisions leading to the adoption of agricultural innovations.

The clustering of variables concerning the wife's farm activities--her participation in decision-making, tasks, and information-seeking--suggests a number of behaviors which may be part of a package associated with her role as farm business partner.

Perhaps wives who participate actively in farm tasks or information-seeking generally strengthen their bargaining position in decision-making because they can draw upon knowledge and experiences relevant to the content of the decisions. Or, wives who are involved in decision-making might find that their involvement spills over into other areas-participation in decisions may be accompanied by responsibility for gathering information to be used in decision-making or for seeing that the resulting decisions are put into action.

In keeping with this interpretation of the data are Wilkening and Bharadwaj's (1967) observation that patterns of task allocation within the family tend to be similar to patterns of decision-making, and Bostian and Ross' (1965) claim that the farm wife's orientation to information sources is influenced by her participation in the business operations of the farm.

Whether involvement generates interest, or interest leads to involvement, is subject to speculation. Some wives may prefer the business partner role to the homemaker role and intentionally follow their interests accordingly. Or, keen interest might be kindled in particularly ambitious wives or wives with indecisive husbands. It might even be

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that wives participate in farm decision-making about as much as they care to, with the extent of their involvement depending partly on the circumstances in which they find themselves.

Although no "interest index" was included which can be brought forward for opportune examination, some circumstantial evidence is available when the negative associations between decision-making involvement and income, size of farm, and number of children are considered.

Negative relationships between income and size of farm variables and the wife's involvement in farm decisionmaking have also been documented by Wilkening and Bharadwaj (1968) and Beers (1937). Their speculation that the division of decision-making responsibilities into farm and home areas becomes more pronounced as the size of the farm business increases also seems appropriate here.

The scope and complexity of the technology involved in managing a large farm enterprise may demand specialized knowledge and skills beyond the wife's experiences. Since resources are likely available for hiring help to deal with various operational aspects of the farm business or to handle specific production problems, there may be little need or opportunity for her to participate.

The negative association between the wife's involvement in decision-making and the number of children in the family possibly reflects another facet of the farm wife's role. The larger the family, the more it might be supposed that the wife's time and energy resources will be directed to the

homemaker-mother role, with her role in the family business as a more or less marginal member. Although family size might also be linked with socioeconomic level and associated decision-making norms, no significant relationships were noted between the number of children in the family and any of the socioeconomic variables.

Of course the wife alone does not determine her decision-making role--the income and size of farm are indicative of her husband's occupational success, and he presumably has something to do with the number of children. Other investigators have found that wives of highly successful operators tend to prefer male-dominant authority patterns in farm matters (Straus, 1958), and that as the number of children increases, the family power structure becomes more authoritarian and husbands more dominant (Campbell, 1970; Nye, Carlson, and Garrett, 1970).

The only variable included which relates directly to the husband's behavior is his adoption score, which was not associated with the wife's involvement in either general or adoption decisions, her participation in farm tasks, or her information-seeking activity. Straus (1960) similarly found that high adopters were not significantly different from low adopters when the wife's participation in farm decisions was considered, although the two groups were differentiated by variables directly relating to the wife's homemaker role. It seems possible that wives of high adopters, as the wives of the "highly successful" operators in Straus' earlier

investigation (1958), tend to perceive their roles in Straus' "integrative-supportive" terms, and at the same time neither emphasize nor ignore their business partner role.

Since Extension contact was the only wife-specific variable (other than age) relating to the husband's adoption score, it might be suspected that such contact is more a function of his information-seeking behavior than of hers. A wife, for example, may make telephone calls to agents on her husband's behalf, or find herself listening to the agents' radio reports simply because her husband is in control of the dial.

Supporting this speculation is the finding that the wife's information-seeking behavior in general, but not her Extension contact in particular, is associated with her participation in farm decisions, and Lionberger's (1960) generalization that earlier adopters tend to draw upon more authoritative information sources than do later adopters.

The overall interpretation of the major findings from this study focuses on behaviors associated with the extent of the wife's farm decision-making activity, and how resources such as money, time, energy, and skills may affect her emphasis on a business partner role. In this connection it should be pointed out that among those variables not associated with the wife's participation in decision-making were education, age, and social participation. Perhaps, as Wilkening and Lupri (1965) once hypothesized, involvement in farm family decision-making is more a function of roles within the farm or family system than of status in the larger society. Data from the study suggest several considerations for designing educational programs for farm families by helping to identify a framework of existing family decision-making patterns useful in facilitating the diffusion of agricultural information.

The particularly strong relationship noted between the wife's involvement in farm decisions and her informationseeking activity suggests that wives who are influential in decision-making also have predispositions to seek information relevant to the content of the decisions. While such wives presently seem to rely on information sources of a personal nature, they would seem to be potential candidates for receiving, evaluating, and transmitting agricultural information originating from other sources, such as the Agricultural Extension Service.

Since joint decision-making patterns appear likely to occur in families with relatively small farm operations, perhaps agents working with such families might do well to structure their approach to include both husband and wife. Information relating specifically to farm work roles might also be directed to both partners, as wives who are involved in farm decision-making also appear to be active participants in farm tasks.

The advisability of encouraging the wife's involvement in farm decisions seems questionable, even though educational programs such as Extension Farm and Home Development (Dorner, 1955; Slocum and Brough, 1962) have promoted

joint decision-making in farm and home matters as a means of developing family decision-making skills.

Since the focus of agricultural programs is traditionally production-oriented, with emphasis on increasing financial stability and encouraging the acceptance of technological changes, there would seem to be no particular advantage to changing the existing decision-making patterns. Joint decision-making already appears extant in families on small, less financially successful farms where the distribution of resources is probably most crucial. And the presence or absence of joint decision-making in farm matters does not seem to affect the husband's acceptance of agricultural innovations.

Working within already existing decision-making patterns is surely more efficient and effective, as introducing new methods of decision-making along with technological change is essentially the same as introducing two new ideas at the same time. Existing family decision-making patterns not only offer convenient frameworks for facilitating the diffusion of decision-making information, but indicate directions for designing learning experiences making the most beneficial use of resources and personnel.

Finally reviewing the results of this study along with findings from the three other investigations which it best complements (Table 15), it is heartening to note the consensus which occurs despite variations in focus and methodology:

#### TABLE 15

# PREDICTORS OF THE WIFE'S INVOLVEMENT IN FARM DECISION-MAKING: FINDINGS FROM FOUR STUDIES²



1. A positive relationship between the wife's involvement in farm tasks and her involvement in farm decisionmaking has also been confirmed by Wilkening and Bharadwaj (1968).

2. Negative associations between income and size of farm and the wife's participation in farm decision-making have also been observed by Wilkening and Bharadwaj (1968) and Beers (1937).

3. The failure to find a significant association between the husband's adoption score and the wife's involvement in farm decision-making has also been reported by Straus (1960). (However, the nonlinear relationship that Straus suspected, but did not test for, did not materialize.)

While generality is restricted, the findings from this study appear to corroborate findings from previous research.

Discrepancies occur only with the education variables. Negative relationships between educational levels of the husband and wife and the wife's participation in farm decisionmaking were claimed by Wilkening and Bharadwaj (1968), while the data here (Sawer, 1972) yielded no significant associations. Characteristics of the respondents possibly influence the results--both husbands and wives in this study had completed an average of eight years in school, while in Wilkening and Bharadwaj's sample husbands had completed eight years and wives twelve years.

This investigation differs from the other three cited in considering variables relating to the wife's overall seeking of farm information, her contact with the Agricultural Extension Service, her social participation, and the size of her family. It also includes an examination of the wife's involvement in specific adoption decisions, rather than restricting analysis to her participation in decisions relating to farm matters in general.

Major findings from the study, considered collectively, suggest the following general conclusions:

1. There appears to be a cluster of behaviors which may be part of a package associated with the wife's farm business partner role, with the wife's participation in farm decision-making strongly related to her involvement in farm tasks and her seeking of agricultural information.

2. Situational variables, such as income, farm size, and family size, seem likely to restrict or encourage the wife's participation in farm decisions as family resources such as money, time, energy, and skills are allocated between farm and home units.

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### APPENDIX A

### PERCENTAGE DISTRIBUTIONS FOR

### ALL PREDICTOR VARIABLES

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### TABLE 16

## PERCENTAGE DISTRIBUTION OF WIVES BY TOTAL INFORMATION-SEEKING SCORES

Score ^a	n	<b>%</b>
0	15	22.4
1-4	18	26.9
5-14	23	34.3
15 or more	11	16.4
Total:	67	100.0

^a Categories determined by natural breaks or groupings in the frequency distribution of raw scores.

#### TABLE 17

PERCENTAGE DISTRIBUTION OF WIVES BY NUMBER OF EXTENSION CONTACTS

Number of contacts ^a	n	%
0	. 36	53•7
1-2	4	6.0
3-4	8	11.9
5-8	7	10.4
9-10	6	9.0
More than 10	6	9.0
Total:	67	100.0

^a Categories determined by natural breaks or groupings in the frequency distribution of raw scores.

#### TABLE 18

# PERCENTAGE DISTRIBUTION OF WIVES BY

### TOTAL TASK INVOLVEMENT SCORES

Score ^a	n	%
24	11	16.4
25-34	20	29.9
35-44	23	34.3
45 or more	13	19.4
Total	67	100.0

^a Categories determined by natural breaks or groupings in the frequency distribution of raw scores.

TABLE	19
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PERCENTAGE DISTRIBUTION OF FAMILIES BY GROSS AGRICULTURAL INCOME^a

n	%
14	20.9
9	13.4
14	20.9
9	13.4
4	6.0
4	6.0
1	1.5
2	3.0
9	13.4
66	98.5
	n 14 9 14 9 4 4 1 2 9 66

a No data for one respondent. b Categories according to Alleyne and Verner (1969b).

# TABLE 20 PERCENTAGE DISTRIBUTION OF FAMILIES BY SIZE OF FARM

Total acreage ^a	n	<del>g</del> o
Less then 3 acres	5	7•5
3 to less than 5	8	11.9
5 to less than 15	23	34•3
15 to less than 30	12	17.9
30 to less than 50	3	4.5
50 to less than 80	5	7.5
80 to less than 120	1	1.5
120 to less than 180	2	3.0
180 or more	8	11.9
Total:	67	100.0

^a Categories according to Alleyne and Verner (1969b).

### TABLE 21

PERCENTAGE DISTRIBUTION OF HUSBANDS AND WIVES BY AGE

	W	ives	Hu	sbands	
Agea	n	%	n	%	
25-34	6	9.0	2	3.0	
35-44	17	25.4	15	22.4	
45-54	21	31.3	19	28.3	
55-64	21	31.3	20	29.9	
65 or more	2	3.0	11	16.4	
Total:	67	100.0	67	100.0	

^a Categories according to Alleyne and Verner (1969b).

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### TABLE 22

PERCENTAGE DISTRIBUTION OF HUSBANDS AND WIVES BY EDUCATION

Years of school	W	ives %	Hu	sbands %		
Less than 5	8	11.9	9	13.4		
5-8	21	31.3	26	38.8		
9-11	20	29.9	24	35.8		
12 (h.s. diploma)	13	19.4	3	4.5		
Some university	5	7.5	5	7.5		
University degree	0		0			
Total:	67	100.0	67	100.0		

a Categories according to Alleyne and Verner (1969b).

### TABLE 23

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PERCENTAGE DISTRIBUTION OF WIVES BY SOCIAL PARTICIPATION SCORES

Score ^a	n	<i>%</i>
0	15	22.4
1-4	5	7•5
5-14	33	49.2
15-24	11	16.4
25-49	l	1.5
50 or more	2	3.0
Total:	67	100.0

^a Categories according to Alleyne and Verner (1969b).

# TABLE 24 PERCENTAGE DISTRIBUTION OF FAMILIES BY NUMBER OF CHILDREN

Number of children ^a	n	- <i>1</i> 6
None	3	4.5
1-2	15	22.4
3-4	31	46.2
5 or more	18	26.9
Total:	67	100.0

^a Categories according to Alleyne and Verner (1969b).

# TABLE 25 PERCENTAGE DISTRIBUTION OF HUSBANDS BY ADOPTION SCORES

Adoption score ^a	n	%
18-21 (Laggards)	5	7•5
22-25 (Late majority)	21	31.3
26-29 (Early majority)	27	40.3
30 (Innovators/early adopters)	14	20.9
Total:	67	100.0

^a Adopter categories determined by Alleyne and Verner (1969b).

## APPENDIX B

# LOW, MIDDLE, AND HIGH DECISION-MAKING GROUPS: MEANS AND STANDARD DEVIATIONS FOR ALL VARIABLES

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# TABLE 26 LOW, MIDDLE, AND HIGH GENERAL DECISION-MAKING GROUPS: MEANS AND STANDARD DEVIATIONS

FOR ALL VARIABLES

	Low group $(n = 26)$		Middle g	Middle group $(n = 28)$		High group $(n = 13)$	
Variable	Mean	S.D.	Mean	S.D.	Mean	S.D.	
General decision-making	29.96	3.70	38.14	1.35	46.85	5.48	
Adoption decision-making	6.42	11.56	31.07	19.81	80.85	62.31	
Information-seeking	3.23	3,52	8.43	7.98	15.92	11.45	
Task involvement	31.46	13.50	36.29	11.66	45.85	11.82	
Income	65,638.50	85,111.90	16,185.70	26,140.80	6,484.62	6,024.10	
Size of farm	132.15	193.09	25.14	35.37	9.62	8.84	
Number of children	4.58	2.37	3.79	2.17	2.85	1.63	
Social participation	10.77	13.27	9.36	11.32	8.23	8,52	
Extension contact	2.69	5.33	4.18	6.18	5.46	8.07	
Educationhusband	8.42	3.56	8.43	2.57	8.46	3.60	
Educationwife	9.58	3.53	8.46	3.29	8.15	3.44	
Agehusband	53.77	11.98	52.07	9.40	56.15	12.60	
Agewife	48.62	10.32	48.00	8.94	50.77	10.13	
Husband's adoption score	26.50	3.25	25.96	2.82	25.85	3.87	

# TABLE 27 LOW, MIDDLE, AND HIGH ADOPTION DECISION-MAKING GROUPS: MEANS AND STANDARD DEVIATIONS

FOR ALL VARIABLES

Variable	Low group (n = 23) Mean S.D.		Middle g Mean	roup (n = 32) S.D.	High gr Mean	High group $(n = 12)$ Mean S.D.	
General decision-making	30.78	5.10	37.56	3.67	45.50	7.27	
Adoption decision-making	0.00	0.00	28,25	8.74	98.67	51.23	
Information-seeking	2.74	2.86	6.31	6.27	21.83	7.36	
Task involvement	32.04	14.79	34.44	7.79	49.25	14.96	
Income	68,969.60	89,219.20	18,106.20	27,778.50	6,533.33	6,288.42	
Size of farm	132.39	198.80	34.03	64.08	10.92	11.45	
Number of children	4.35	2.57	4.03	1.99	2.75	1.82	
Social participation	11.87	13.78	6.28	5.70	14.58	16.07	
Extension contact	1.95	3.13	4.16	6.98	6.67	7.91	
Educationhusband	8.70	3.31	7.84	2.74	9.50	3.71	
Educationwife	9.83	3.73	7.88	3.43	9.50	1.98	
Agehusband	53.87	11.60	53.31	10.20	53.42	12.93	
Agewife	48.74	9.58	49.00	9.82	48.25	10.01	
Husband's adoption score	26.78	2.24	25.38	3.44	27.00	3.69	

### APPENDIX C

# LOW, MIDDLE, AND HIGH DECISION-MAKING GROUPS: SOURCES OF VARIANCE FOR ONE-WAY ANALYSES OF VARIANCE

### TABLE 28

# GENERAL DECISION-MAKING GROUPS: VARIANCE SOURCES FOR ONE-WAY ANALYSES OF VARIANCE

Source	SS	df	MS	F	р
	Informatio	on-seeki	ng	·	
Between groups Within groups Total	1411.39 3604.40 5015.79	2 64 66	705.70 56.32	12.53	<.001
	Task inv	rolvemen	t		
Between groups Within groups Total	1793.28 9899.89 11693.17	2 64 66	896.64 154.68	5.79	.005
	Inc	omea			
Between groups Within groups Total	4386949.72 19971473.27 24358422.99	2 63 65	2193474.86 317007.51	6.91	.002
	Size c	of farm			
Between groups Within groups Total	201487.21 966841.90 1168329.11	2 64 66	100743.60 15106.90	6.66	.003
	Number of	childr	en		
Between groups Within groups Total	26.70 298.77 325.47	2 64 66	13.35 4.66	2.86	.063
					ued)

^a No data for one respondent.
# TABLE 28 (continued)

Source	SS	df	MS	F	р
·····	Social pa	rticipat	ion		
Between groups Within groups Total	61.06 8729.36 8790.42	2 64 66	30.53 136.39	.22	.804
	Extensio	n contac	t		
Between groups Within groups Total	71.63 2522.87 2594.50	2 64 66	35.82 39.42	•91	.410
	Education	husbar	nd		
Between groups Within groups Total	0.00 650.45 650.45	2 64 66	0.00 10.16	•00	•996
	Educati	onwife	)		
Between groups Within groups Total	24.18 747.02 771.20	2 64 66	12.09 11.67	1.03	•364
	Ageh	usband			
Between groups Within groups Total	150.54 7880.18 8030.72	2 64 66	75.27 123.12	.61	•552
	Age-	-wife			
Between groups Within groups Total	69.18 6050.47 6119.65	2 64 66	34•59 94•53	•36	•704
	Husband's ad	option a	score		
Between groups Within groups Total	5.34 659.17 664.51	2 64 66	2.67 10.29	.25	.781

## TABLE 29 ADOPTION DECISION-MAKING GROUPS: VARIANCE SOURCES FOR ONE-WAY ANALYSES OF VARIANCE

Source	SS	df	MS	F	p
	Information	n-seeki	.ng		
Between groups Within groups Total	3022.82 1992.98 5015.80	2 64 66	1511.41 31.14	48.54	<.001
	Task invo	lvement	5		
Between groups Within groups Total	2540.08 9153.08 11693.16	2 64 66	1270.04 143.02	8.88	.001
	Inco	me ^a			
Between groups Within groups Total	4444500•74 19913922•25 24358422•99	2 63 65	2222250.37 316094.00	7.03	.002
	Size o	f farm			
Between groups Within groups Total	170125.74 998203.37 1168328.11	2 64 66	85062.87 15596.93	5.45	.007
	Number of	child	ren		
Between groups Within groups Total	21.03 304.44 325.47	2 64 66	10.51 4.76	2.21	.116
				(contin	ued)

.

^a No data for one respondent.

100

TABLE 29 (continued)

Source	SS	df	MS	F	p
	Social par	ticipati	on		
Between groups Within groups Total	768.42 8021.99 8790.41	2 64 66	384 <b>.21</b> 125 <b>.</b> 34	3.02	•055
	Extension	n contac	t		
Between groups Within groups Total	180.67 2413.84 2594.51	<b>2</b> 64 66	90•33 37•72	2.40	•097
	Education	husban	d		
Between groups Within groups Total	26.36 624.09 650.45	<b>2</b> 64 66	13.18 9.75	1.35	•266
	Education	nwife			
Between groups Within groups Total	57.39 713.81 771.20	2 64 66	28.70 11.15	2.57	.083
	Ageh	usband			
Between groups Within groups Total	4.32 8026.40 8030.72	2 64 66	2.16 125.41	.02	•968
	Age	wife			
Between groups Within groups Total	4.96 6114.69 6119.65	2 64 66	2.48 95.54	.03	•959
	Husband's ad	option a	score		
Between groups Within groups Total	37.09 627.41 664.50	2 64 66	18.55 9.80	1.89	.157

# APPENDIX D

### INTERVIEW SCHEDULE

# PREDICTORS OF THE WIFE'S INVOLVEMENT IN FARM DECISION-MAKING

Respondent's Name	
Address	
Telephone Number	
Code Number	
Date of Interview	
	·

Comments:

...

#### INTERVIEW SCHEDULE^a

### PREDICTORS OF THE WIFE'S INVOLVEMENT IN FARM DECISION-MAKING

- (Respondent's number) 1.2. (Data card number--1) 3.
- How long have you and your husband been farming? 4.5.

What is your major agricultural operation? 6.

- 0. No response
- 1. Don't know
- 2. Strawberries
- Other small fruits 3.
- **4**. Dairy
- 5. Cattle (excluding dairy), hogs, sheep
- Poultry
- Vegetables 7.
- Tree fruits 8.
- 9. Greenhouses, cut flowers, nursery

7. (Husband's response to above)

8. What is your secondary agricultural operation?

9. (Husband's response to above)

10.11.12. How many acres do you farm?

. 11

13,14,15. (Husband's response to above)

^a Numbers along the left margin refer to columns on the data cards--responses were recorded directly on computer coding forms during the interviews. General comments and answers to open-ended questions were recorded on face sheets identifying each respondent. Items in (s) refer to calculations or to husbands' responses taken from Alleyne and Verner's (1969a) data.

- 19,20,21. (Husband's response to above)
- 22,23,24. (Number of acres devoted to agricultural operations other than strawberries--wife's response)
- 25,26,27. (Number of acres devoted to agricultural operations other than strawberries--husband's response)
- 28,29,30,31. What was the gross value of sales from all your agricultural operations last year? (Do not record last two digits on income items)
- 32,33,34,35. (Husband's response to above)
- 36,37,38,39. What was the gross value of strawberries you sold last year?
- 40,41,42,43. (Husband's response to above)
- 44,45,46,47. (Gross value of sales from agricultural operations other than strawberries--wife's response)
- 48,49,50,51. (Gross value of sales from agricultural operations other than strawberries--husband's response)

(START DATA CARD #2)

- 1,2. (Respondent's number)
  - 3. (Data card number--2)

Have you or your husband attended any meetings of the Lower Mainland Horticultural Improvement Association <u>this year</u>? How many were attended by--

- 4. Husband only
- 5. Husband and wife together
- 6. Wife only

Did you or your husband attend any meetings of the Lower Mainland Horticultural Improvement Association <u>last year</u>? How many were attended by--

- 7. Husband only
- 8. Husband and wife together
- 9. Wife only
- 10. Did you or your husband attend the Strawberry Field Day <u>this year</u>?
  - 0. No response
  - 1. Don't know
  - 2. Neither husband nor wife
  - 3. Husband only
  - 4. Husband and wife together
  - 5. Wife only
- 11. Last year?
- 12. <u>This year's</u> Growers' Short Course sponsored by the Lower Mainland Horticultural Improvement Association?
- 13. Last year's Grower's Short Course?

Have you or your husband attended any other growers' short courses this year? How many were attended by--

- 14. Husband only
- 15. Husband and wife together
- 16. Wife only

Last year? How many were attended by--

- 17. Husband only
- 18. Husband and wife together
- 19. Wife only

Have you or your husband attended any other agricultural meetings, short courses, or field days <u>this</u> <u>year</u>? How many were attended by--

- 20. Husband only
- 21. Husband and wife together
- 22. Wife only

Last year? How many were attended by--

- 23. Husband only
- 24. Husband and wife together
- 25. Wife only
- 26. Who is your District Agriculturist?
  - 0. No response
  - 1. Don't know
  - 2. Incorrect
  - 3. Correct
- 27. Who is your District Horticulturist?

(START DATA CARD #3)

1,2. (Respondent's number) 3. (Data card number--3)

In the past year how many times have you yourself: Attended agricultural meetings or field days 4.5. sponsored by the District Horticulturist? (D.H.) 6.7. By other agricultural agents? 8.9. Had farm visits by the D.H.? By other agricultural agents? 10.11. 12.13. Visited the office of the D.H.? Of other agricultural agents? 14.15. Had telephone conversations with the D.H.? 16.17. With other agricultural agents? 18,19. Listened to radio or television programs given 20.21. by the D.H.? By other agricultural agents? 22.23. Read newspaper articles written by the D.H.? 24.25. 26.27. By other agricultural agents? 28,29. Read circular letters or bulletins from the D.H.? From other agricultural agents? 30,31. (Number of contacts with the D.H.) 32.33. (Number of contacts with other agents) 34.35.

36,37,38. (Total number of Extension contacts)

Who in your family: (Task involvement index)

39. Recruits the pickers

0. No response
1. Neither husband nor wife
2. Husband only (2)
3. Husband more than wife (3)
4. Husband and wife about equally (4)
5. Wife more than husband (5)
6. Wife only (6)

40. Keeps the farm accounts

41. Pays the bills

42. Works with the farm machinery

43. Completes the income tax forms

44. Pays the pickers

45. Plants the berries

46. Does the hand weeding

47. Sets the runners between the rows

48. Removes the blossoms

49. Writes the checks

50. Supervises the pickers

51,52. (Total score, task involvement index)

Who in your family decides: (General decisionmaking index)

#### 53. Whether to try a new crop variety

- No response 0.
- 1. Decision has not been considered
- Husband only (2) 2.
- 3. Husband more than wife (3)
- Husband and wife about equally (4)
- 5. 6. Wife more than husband (5)
- Wife only (6)
- 54. Whether to buy or rent more land
- 55. Whether to borrow money for the farm
- 56. Whether to buy major farm equipment
- 57. What specific make of farm equipment to buy
- 58. What kind of fertilizer to use
- Whether to attend an agricultural meeting 59.
- 60. Whether to subscribe to a farm publication
- 61. How many farm workers to hire
- 62. Whether to try a new farm practice
- 63. Whether to increase or decrease crop acreage
- 64. Whether to switch to a new crop

65,66. (Total score, general decision-making index)

- How do you feel about the decision-making part of 67. farming?
  - 0. No response
  - Strongly dislike having to make decisions 1.
  - Somewhat dislike having to make decisions 2.
  - Have no particular feeling either way Somewhat enjoy making decisions 3.
  - 4.
  - 5. Greatly enjoy making decisions
- How difficult would you say it is for you to make up 68. your mind and come to a decision?
  - 0. No response
  - Very difficult 1.
  - 2. Considerably difficult
  - Moderately difficult 3.
  - 4. Slightly difficult
  - Not at all difficult 5.
- Does your husband ever bring home agricultural pub-69. lications for you to read?
  - 0. No response
  - 1. Never
  - 2. Seldom
  - Occasionally 3.
  - 4. Frequently
  - Very frequently 5.
- Do you ever bring home agricultural publications 70. for him to read?
- Do you ever tell your husband something you have 71. read or heard about agricultural matters?
- When your husband is considering a new farm practice 72. do you yourself try and find out about it?

(START DATA CARD #4)

1,2. (Respondent's number) (Data card number--4) 3.

> (Ask in sequence indicated by column numbers for each innovation separately)

4,13,22,31,40,49. Are you familiar with the practice of:

- Soil analysis for nematode a. control
- Spraying with Captan for Ъ. fruit-rot control
- Using "matted_rows" instead C. of "hills"
- Chemical weed control d.
- Using picking carts e 😱
- f. Using virus-free certified plants
- 0. No response
- 1. Don't know
- 2. No
- 3. Yes

5,14,23,32,41,50.

Are you using this practice on your farm?

6.15.24.33.42.51.

Who introduced the subject of the practice?

- 0. No response
- Never considered Don't know 1.
- 2.
- 3. Husband only
- 4. Husband more than wife
- Husband and wife about 5. equally
- 6. Wife more than husband
- Wife only 7.

27,16,25,34,43,52.

Who found out information about the practice?

8.17.26.35.44.53.

Who decided if the practice were appropriate for your farm?

- 9.18.27.36.45.54. Who decided whether to try the practice?
  10.19.28.37.46.55. Who decided whether to adopt the practice?
  11.20.29.38.47.56. Who decided to discontinue the practice?
  12.21.30.39.48.57. Have you yourself ever tried to find out anything about this practice?
  - 0. No response 1. No 2. Yes

(If yes) What sources of information did you use to find out about this practice? (open-ended)

(START DATA CARD #5)

- 1,2. (Respondent's number)
  - 3. (Data card number--5)

(Adoption decision-making index)

a. Husband only (0)
b. Husband more than wife (10)
c. Husband and wife about equally (20)
d. Wife more than husband (30)
e. Wife only (40)

- 4,5. (Score for <u>soil</u> <u>analysis</u>--from columns 6-11, data card #4)
- 6,7. (Score for <u>Captan</u>--from columns 15-20, data card #4)
- 8,9. (Score for <u>matted</u> <u>rows</u>--from columns 24-29, data card #4)
- 10,11. (Score for <u>chemical weed control</u>--from columns 33-38, data card #4)
- 12,13. (Score for <u>picking carts</u>--from columns 42-47, data card #4)
- 14,15. (Score for <u>virus-free</u> <u>certified</u> <u>plants</u>--from columns 51-56, data card #4)
- 16.17.18. (Total score, adoption decision-making index)

(Index of husband's adoption of agricultural innovations)

- 19. (Soil analysis)
- 20. (Captan)

21. (Matted rows)

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(Chemical weed control) 22.

- 23. (Picking carts)
- 24. (Virus-free certified plants)
- (Total score, husband's adoption of agricultural 25,26. innovations)

(Information-seeking index)

- 27. (Number of agricultural meetings, field days, and short courses attended -- from columns 4-25, data card #3)
- (Husband brings home agricultural publications for 28. wife to read--from column 69, data card #3)
  - Never (0) a.
  - Seldom (1) Ъ.
  - Occasionally (2) Frequently (3) c.
  - d.
  - Very frequently (4) e.
- 29. (Wife brings home agricultural publications for husband to read--from column 70, data card #3)
- (Wife tells husband what she has read or heard 30. about agricultural matters--from column 71, data card #3)
- (Wife tries to find out about new practice husband 31. is considering--from column 72, data card #3)
- (Number of sources of information used in general 32. decision-making--from open-ended item, data card #3)

- 33,34. (Number of sources of information used in adoption decision-making--from open-ended item, data card #4)
- 35,36. (Total score, information-seeking index)

(START DATA CARD #6)

- 1.2. (Respondent's number) (Data card number--6) 3.
  - 4. Where were you born?
    - 0. No response
    - British Isles 1.
    - 2. Germany, Austria
    - 3. The Netherlands
    - 4. Denmark, Norway, Sweden
    - 5. 6. Ukraine, Russia
    - Japan
    - 7. India
    - 8. East Europe
    - USA 9•
    - Canada Α.
- (If other than Canada) When did you migrate to 5.6. Canada:
- 7,8. What is your age?
- 9,10. What is your husband's age?
- 11.12. (Difference in ages)
- 13.14. How many years have you been married?
- 15,16. How many children do you have?
  - 17. How many are not yet of school age?
  - 18. How many are in school?
- 19.20. How many are not living at home?
  - 21. Did you work off the farm last year?
    - 0. No response 1. No 2. Yes

22. How much time did you spend working off the farm?

- 0. No response
  1. No off-farm work
  2. Less than 1/4-time off-farm work
  3. 1/4 to less than 1/2-time off-farm work
  4. 1/2 to less than 3/4-time off-farm work
  - 5. 3/4 to less than full-time off-farm work
  - 5. 3/4 to less tha 6. Full-time work

#### 23. What was your job?

- 0. No response
- 1. No off-farm work
- 2. Agriculture-related job
- 3. Other job

What organizations did you belong to during the past year? (Chapin Social Participation Scale, 1955)

- a. Name (1)
- b. Attendance (2)
- c. Financial contribution (3)
- d. Committee member (4)
- e. Offices held (5)

24. (Number of organizations named)

- 25,26. (Total score, Chapin Scale)
- 27.28. How many years in school did you complete?
- 29,30. How many years in school did your husband complete?

(Sewell Scale, Short Form, 1943--Record responses in first column, weights in second column)

- 31,45. Construction of house:
  - 1. Unpainted frame or other (3)
  - 2. Brick, stucco, or painted frame (5)

- 32,46. Room-person ratio (number of rooms divided by number of persons):
  - 0. No response
  - 1.
  - Below 1.00 (3) 1.00-1.99 (5) 2.
  - 2.00 and up (7) 3.

33,47. Lighting facilities:

Oil lamps, other, or none (3) 1. 2. Gas, mantle, or pressure (6) Electric (8) 3.

34,48. Water piped into house:

No response No (4) 0. 1. 2. Yes (8)

35,49. Power washer:

No response 0. No (3) 1. 2. Yes (6)

36,50. Refrigeration:

0. No response Other or none (3) Ice (6) 1. 2. 3. Mechanical (8)

37,51. Radio:

0. No response No (3) Yes (6) 1. 2.

38,52. Telephone:

No response 0. No (3) Yes (6) 1. 2.

39.53. Car: (or pickup truck)

0. No response 1. No (2) 2. Yes (5)

40,54. Family takes daily or weekly newspaper:

0.	No	response
1.	No	(3)
2.	Yes	; (6)

41.55. (Wife's education--years completed)

No response
 0 to 7 (2)
 8 (4)
 9-11 (6)
 12 (7)
 13 and up (8)

42,56. (Husband's education--years completed)

No response
 0 to 7 (3)
 8 (5)
 9-11 (6)
 12 (7)
 13 and up (8)

43,57. Husband attends church or Sunday School at least once a month:

0. No response 1. No (2) 2. Yes (5)

44,58. Wife attends church or Sunday School at least once a month:

0. No response 1. No (2) 2. Yes (5)

59.60. (Total score, Sewell Scale)

(START DATA CARD #7)

- 1,2. (Respondent's number)
  - 3. (Data card number--7)

Do you agree or disagree: (Goard and Dickinson Attitude Toward Change Scale, 1968)

- 4. I would not mind leaving here in order to make a substantial advance in my occupation.
  - 0. No response
  - 1. Disagree
  - 2. Undecided
  - 3. Agree
- 5. I do not want any new job which involves more responsibility.
- 6. I would not leave this area under any circumstances.
- 7. Learning a new routine would be very difficult for me.
- 8. I would find it very difficult to go to school to learn new skills.
- 9. I have no desire to learn a new trade.
- 10. (Total score, Goard and Dickinson Scale)
  - a. Disagree (score 0 for item 4; 1 for items 5-9)
  - b. Undecided (score 0 for items 4 and 9; 1 for items 5-8)
  - c. Agree (score 1 for item 4; 0 for items 5-9)