

PERCEIVED IMPORTANCE OF IDENTIFIED
COMPETENCIES AS A BASIS FOR
DEVELOPING EDUCATIONAL PROGRAMS
IN SMALL, RURAL AGRIBUSINESS
MANAGEMENT

Dissertation for the Degree of Ph. D.
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GORDON EVERETTE FERGUSON
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ABSTRACT

PERCEIVED IMPORTANCE OF IDENTIFIED COMPETENCIES AS A BASIS FOR DEVELOPING EDUCATIONAL PROGRAMS IN SMALL, RURAL AGRIBUSINESS MANAGEMENT

By

Gordon Everette Ferguson

Purpose

The purpose of this study was to develop a rank-ordered list of managerial and agricultural technology areas of concepts and/or competencies common to various types of small, rural agribusinesses. The importance of such information was to be established as one basis for future education program planning.

Design and Methodology

Literature attributed over 90 percent of small business failures to management errors, but failed to identify a comprehensive list of requirements for success. A data collection instrument incorporating 82 managerial and 38 agriculture technology items was developed and refined through the use of an advisory committee and a jury of experts. Responses of seventeen Expert Managers, fifteen Other Managers, ten Agriculture Teachers, twelve Professional Management Educators, and ten Other Professional Workers were analyzed. Participants were asked to indicate the degree of importance of, and need

for future training about each item, for success. Responses were given values of: 4 = Very Important, 3 = Important, 2 = Of Unknown Importance, 1 = Of Little Importance; and 0 = Of No Importance. A one-way multivariate analysis of variance was used to test for significant differences between means of Expert Managers' responses, and those of each of the other four groups.

Findings

Areas, ranked from highest to lowest percentages of "Very Important," or "Important" responses by Expert Managers, as to relative importance for successful management were: (1) Communications, (2) Goals and Objectives, (3) Management Participation, (4) Human Relations, (5) Planning, (6) Standards, (7) Individual Differences, (8) Role Definition, (9) Evaluation, (10) Size, (11) Atmosphere, (12) Agricultural Mechanics, (13) Crops and Soils, (14) Change, (15) Control, (16) Agricultural Economics, and (17) Livestock Enterprises. Individual items within each area were ranked according to means and percentages of "Very Important" or "Important" Expert Managers' responses, and comparable percentages were shown for the other groups' responses as well. Percentages were shown to be more discriminatory than means for ranking items.

Expert Managers' mean responses differed significantly at the .05 level from those of Other Managers' in the importance of "Communications"; from Agriculture Teachers' in "Human Relations"; from Professional Management Educators' in the importance of "Agricultural Mechanics," "Management Participation," and "Human Relations"; and from Other Professional Workers' in the importance of the "Size"

component. Differences were also significant at the .05 level between the mean responses of Expert Managers and those of Professional Management Educators on the importance of future training in "Planning"; and from Other Professional Workers in the area of "Crops and Soils." No significant differences were found between Expert Managers' and Other Managers', or Agriculture Teachers' perceptions of need for future training in the seventeen areas compared. None of the rural groups had significant differences of opinions on importance of future training in any of the Management Function areas.

If all items for which future training was perceived to be at least "Important" by 50 percent of any one rural group were included, an in-service program would include 74 of the 82 Management Function, and 22 of the 38 Agriculture Technology items, or 96 of the 120 items studied.

Conclusions

Since the opinions of Expert Managers did not differ significantly from the opinions of other groups of respondents, on the relative importance of future training in concepts and/or competencies, Expert Managers' opinions appear to be a sound basis for future educational program planning. Area and item ranking by Expert Managers is suitable for establishing priorities for preservice educational programs. Percentages are preferable to means as a basis for establishing priorities. Where differences are not evident, individuals from various groups should be able to be grouped together for in-service education.

Recommendations

Both preservice and in-service managerial education based upon findings of this study should be made available to present, and potential employees of small, rural agribusinesses. Training should be provided in components studied, for teacher certification eligibility. Personnel from all types of small, rural agribusinesses should be considered for in-service training.

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CHAPTER I

INTRODUCTION

THE PROBLEM

Experts in the field of business management have indicated the greatest need in most small businesses is for improved management. However, little work had been done towards identifying needs for specific competencies for successful management of small, rural agribusinesses. As a basis for considering alternatives for providing future education to managers of small, rural agribusinesses, a study was required. Recognizing this need, the Michigan Department of Education provided a grant to be used in the establishment of a list of required concept and/or competency areas, and assessing their relative importance. The study was to not only identify, and establish the degree of need for managerial competency areas, but also needs for future training in those areas required for success in roles relative to the management of such businesses as perceived by various types of individuals. In order to implement management education programs for small, rural agribusiness managers, perceptions of agriculture teachers and others who might be involved in provision

of managerial education were needed as a basis for designing educational offerings to meet the needs of those groups.

THE BACKGROUND AND NEED FOR THE STUDY

Many studies have been conducted which identified activities and competencies for employment in specific agribusinesses. Most of those studies aimed at aiding in designing preservice or entry level training for semi-skilled and skilled workers in specific agribusinesses such as machinery retail sales and service businesses. A few examples are briefly discussed in Chapter II.

Some former studies have used the "Functions of Industry" approach to identifying educational needs for specific industries. No studies were identified which used the approach taken in this effort--securing the opinions of many types of individuals to determine competency areas common to all types studied.

The practice of providing group instruction for farmers from widely differing types of farms has been shown to bring desirable results. This led to the thought that managers of other diverse small, rural agribusinesses may also be clustered in a similar manner for both preservice and in-service education designed to improve their managerial competencies. If evidence could be obtained, to support such an approach to clustering of management trainees, programs of education might be provided in many small communities, where such assistance had not previously been available.

In most small, rural communities there is only one, or a few non-farm agribusinesses of each specific type. Training programs

organized for competencies in one specific industry require participation at a location at least several miles from the place of employment of most participants. In-service managerial training, to be readily accessible should be conducted in the community where the participants are located. If common educational needs of various types of farmers, elevator operators, farm machinery dealers, and other managerial personnel from any one rural community can be met through this approach to restructuring training programs, a serious deterrent to participation might be drastically reduced, or possibly eliminated for many rural agribusiness managers.

As mentioned in the opening sentence of this chapter, improved management is the greatest need in small businesses. Evidence of this can be found in the Review of Literature. This need may be more common in small, rural agribusinesses than in most other small businesses, due to the isolation of rural people and distances from training opportunities, along with other educational disadvantages experienced by most rural area residents.

In an article entitled "The American Challenge" Gordon Swanson stated:

. . . rural communities contain more business enterprises than the rest of the nation combined. They have custody of the bulk of the nation's natural resources and they contain approximately one-third of the nation's elementary and secondary school students. The total size of America's rural population is very often underestimated. . . .

Among its most serious problems are poverty, low standards of public services, disproportionate concentration of sub-standard housing and severe restrictions in educational opportunity. Its school systems have suffered from an eroding tax base and they continue to do so. . . .

. . . Without a considerable amount of external assistance, little progress can be expected. The problems of rural education now border on a national disaster.¹

Earlier in the same article Swanson had cited "application of systems analysis to the implementation of institutional or business objectives," or a management information system, as a reason some rural businesses were more successful than others.² If some outside assistance can be used to provide improved education for management of rural agribusinesses, at least some of the rural problems may be reduced in severity if not eliminated. If the bulk of the country's natural resources are controlled by small, rural businesses as claimed, assistance to improve their management is in the public interest, as well as a humanitarian endeavor from the standpoint of those involved. With suitable evidence to justify such efforts, legislators and other policy makers may be encouraged to provide outside assistance in forms suited to the needs. This study has the potential of furnishing a basis for a viable approach to effectively and efficiently provide needed managerial preservice and in-service training to those in need. It may also contribute to the evidence required to secure the support of decision makers in society, which is needed to assure changes in priorities established for use of public funds, to provide additional services to rural communities. If either of these outcomes materialize, the study will have been worthwhile.

¹Gordon Swanson, "The American Challenge," The Visitor [Department of Agricultural Education, University of Minnesota], LVII, No. 4 (1970), p. 2.

²Ibid., p. 1.

THE PURPOSE

The purpose of this study was to develop a rank ordered list of required managerial and agricultural technology areas of concepts and/or competencies common to various types of small, rural agribusinesses, and needs for future training as perceived by individuals providing training for, or managing such businesses. This information was established as a basis for future education program planning of both preservice and in-service nature.

THE OBJECTIVES

The objectives of this study were to:

1. Determine the degree of importance by rank ordering items on a previously established list of managerial concept and/or competency areas, as perceived by Expert Managers for successful management of small, rural agribusinesses.
2. Determine whether or not there were significant differences between the mean responses from Expert Managers and four other groups--Professional Management Educators, Agriculture Teachers, Other Professional Workers and Other Managers of small, rural agribusinesses.
3. Determine, by rank ordering, the relative degree of importance of personal need for future training in each of the above identified areas, as perceived by the Expert Managers for their successful performance of duties related to small, rural agribusiness management.

4. Summarize the findings obtained under objectives one to three above, using tables, figures and/or narrative descriptions designed to clearly and concisely depict the areas of mutual need for future training as perceived by the various groups named in objective two above.
5. Interpret the findings and draw conclusions upon which recommendations for future educational program planning could be based.
6. Make recommendations for planning of future educational offerings based upon the interpretations of, and the conclusions drawn from the findings of this study.

DEFINITION OF TERMS

Agribusiness

An agribusiness included any one, or a combination of the producing operations involved in raising plants and/or animals, the manufacture and distribution of agricultural equipment and supplies, provision of services to farms and ranches, processing, storage and/or distribution of agricultural commodities requiring agricultural technology competencies.

Agricultural Technology Component Area

As used in this study, the term agricultural technology component area referred to a group of concepts and/or competencies associated with production and/or utilization of resources. "Live-stock Enterprises," "Crops and Soils," and "Agricultural Mechanics";

as well as principles and practices in "Agricultural Economics" were the four agricultural technology component areas.

Educator

In the context of this study, the term educator included one who provided formal education such as a vocational agriculture teacher, county extension worker, or a Michigan State University agricultural management joint appointee having teaching duties coupled with either research and/or extension duties. Also included was one who provided training through informal ways such as an employee of the Soil Conservation Service, Farmers Home Administration, or other government agency. As used in this study, educators were divided into three sub-groups of Professional Management Educators, Agriculture Teachers, or Other Professional Workers, having met criteria set forth in Chapter III for the identification of specific groups.

Function of Industry

A function of industry was a group of related actions contributing to the total achievement of an organization by any separate unit, such as sales, manufacturing or management.

Job

A job was a position of regular employment requiring specific comparable duties regardless of the employing organization, business, industrial establishment, firm or plant; e.g., "truck driver," and "partsman."

Jury of Experts

A jury of experts as used in this study, was a group of individuals who had acquired special skills, knowledge, wisdom, ideals and attitudes in the function of agribusiness management, and/or the teaching of agribusiness management, through professional training and/or practical experience, and were recognized as outstandingly successful by their peers and/or employers. For the purpose of this study, two sub-groups made up the jury of experts: (1) those agribusiness managers who met the established criteria for "Expert Managers," and (2) those "Professional Management Educators" who met the criteria established for acceptance as experts in agribusiness management described in Chapter III. These groups will be referred to throughout this report as "Expert Managers" or "Professional Management Educators."

Managers

Expert Managers. Expert Managers were those having met the criteria established for the purpose of this study as specified in Chapter III, (those recognized by three or more county agricultural leaders as being outstanding expert managers in specific types of businesses).

Other Managers. All Other Managers were small, rural agribusiness managers not qualifying as experts by criteria established in Chapter III, (those identified as below average by at least one agricultural leader from the county). This group included individuals who had been identified by one or two agricultural leaders

as being expert managers if the same individuals were identified by one or more agricultural leaders as being below average managers.

Production Business Managers. Those who operated businesses having 40 percent or greater involvement in any one or two (or in the case of general production, three or more, each consisting of less than 40 percent of the total) plant and/or livestock raising enterprises, such as dairy and cash field crops, or nursery and truck crops were included as Production Business Managers.

Supportive Business Managers. Those who operated businesses which provide input supplies and/or services to production agribusinesses, and/or perform some types of services involved in the marketing and distribution of production agribusiness output, such as veterinarians and grain elevator managers were included as Supportive Business Managers.

Management Function

The management function included fundamental administrative and operational activity or actions involving decision making, policy formulation, control, regulation, and direction of available resources of an organization, or business firm.

Management Competency

Possession of the required knowledge, skills, and attitudes needed to perform a specific action within the management function of an agribusiness or organization was considered to be a competency.

Management Component Area

A cluster of closely related concepts and/or competency groups within the management function of a business or organization, such as planning, were considered to be a management component area.

Off-Farm Agricultural Occupation

A job occurring in a number of organizations, plants, firms, or businesses related to, but not considered to be a part of a production agribusiness, such as an agricultural bulk petroleum product delivery service, or farm machinery retail sales has been considered to be an off-farm agricultural occupation, if involving agricultural technology.

Other Professional Workers

Within the group referred to as "educators" (as opposed to "managers") Other Professional Workers were the group which did not fit into either "Agriculture Teachers" or "Professional Management Educators" categories. This group included such individuals as those employed by the Soil Conservation Service, Farmers Home Administration and other government agencies, not normally included as "business managers," or "educators," but who require knowledge, skills, and/or attitudes within the management function and agricultural technology areas for performing their roles of providing supplies and/or services to production and/or supportive agribusiness managers.

Professional Management Educators

Professional Management Educators were those who provided preservice and in-service formal education at baccalaureate and higher levels, to teachers and managers; in this case, more specifically,

those employees of Michigan State University who were at least part-time extension service persons, in addition to their roles as teachers of teachers of certain phases of agribusiness management, such as dairy, or field crops management.

Rural Territory

That portion of the country, not included in places (incorporated or unincorporated) of 2,500 population or more, or where concentration of population is less than 1,500 per square mile if unincorporated, has been defined as rural territory. Usually included were small communities, and the open countryside found between major centers of population concentrations.

Small, Rural Agribusiness

A commercial or industrial organization is small when measured by standards established by the Small Business Administration for the specific area and industry involved. It is rural if its central headquarters or major place of business is located in a rural community or "open countryside." It is an agribusiness if it serves, or is a part of an organization which for successful operation, requires employees who possess some of the knowledge, skills, and attitudes needed by those employed in some phase of plant and/or animal production.

Agriculture Teachers

Agriculture Teachers were educators who devoted at least 25 percent of their employment to the direction and guidance of individuals in the learning process. For the purpose of this study,

vocational agriculture teachers and county extension service staff members were included.

ASSUMPTIONS

After reviewing literature and based upon commonly accepted beliefs at the time of writing, the following assumptions were made:

1. Improvements in agricultural technology have resulted in needs for reduced numbers of farmers, and productive agricultural units, but has created needs for increased numbers of people and units in supportive agribusinesses to provide goods and services to the productive units.
2. Small agribusinesses in rural communities are utilized by farmers for many services, especially provision of food, feed, chemicals, petroleum products, hardware, equipment and building materials. County seats and larger cities are relied on to supply items such as clothing, entertainment, furniture and appliances. In other words, both rural and urban businesses are needed to supply productive businesses (farms) with required goods and services. Both types of supportive off-farm agribusinesses should be encouraged to flourish.
3. Suitable assistance can be provided to small, rural agribusiness managers in the form of educational programs and ancillary services needed to improve management. The major barrier to implementation is lack of understanding of the various aspects of the problem on the part of policy makers, and society as a whole.

4. Provided with adequate evidence that a specific alternative action has merit, society is capable and has the will to make changes needed to bring about the implementation of improvements, through trial of new or different approaches to solving problems.
5. Evidence of proven theory of business management, which can be used as a basis for educational program development for management of small, rural agribusinesses is lacking. Reliance upon the accumulated knowledge and understanding of experts is necessary in planning educational programs for this function of industry.
6. Because of the diversity of production managers served by supportive business manager respondents, it may be logical to assume that needs of respondents in this study are not extremely different from those of similar types of managers in other locations in Michigan.
7. Practitioners of management, as well as theorists in the field of management education, have significant contributions to make in determining educational programs planned to improve management conditions in our environment. The opinions of one group, without those of the other group, would be less valuable than the two combined, as a basis for adequate educational program planning.

SCOPE AND LIMITATIONS OF THE STUDY

The scope of this study was restricted to identifying and determining the degree of importance of concept and/or competency areas, and needs for future training within the management function of agribusinesses, as perceived by educators of and/or managers of small, rural Michigan agribusinesses for performing their respective roles. It was further restricted to a limited number of each of five types of respondents.

Due to the fact that the study was restricted to only two counties within southwestern Michigan, broad implications for populations beyond the scope of the study must be made with reservations. No evidence has been established to allow generalizations to employees of other types of businesses not included in the population studied. However, the manager respondents selected to participate in this study were taken from many types of small, rural agribusinesses, from counties which are parts of two distinctly different types of farming areas. Nearly all types of production agriculture found anywhere in Michigan may be found within the two counties selected for this study.

Thirty-one Expert Managers and twelve Professional Management Educators served as a jury of experts in developing the final instrument prepared for securing opinions. Thirty-two manager respondents from various types of businesses and thirty-two educators were included in the final survey of opinions concerning the educational needs of managers and educators as reported in this dissertation.

CHAPTER II

REVIEW OF LITERATURE

Traditionally, instruction in agricultural management has been offered almost exclusively to persons engaged in, or preparing for production agricultural managerial positions. In recent years, a growing awareness has evolved of a need for off-farm, or supportive agricultural business management training. This chapter is a brief review of some selected literature pertinent to the problem studied. It is to some extent divided into separate categories, although a certain amount of overlapping has been unavoidable, due to the nature of the writings, which in many cases dealt with several phases of the problem. Nevertheless, the following sections have been included in this review: Background and Identification of the Problem; Management Function Approach to Planning Occupational Training; Concept and/or Competency Areas Required for Successful Management; and a Summary.

BACKGROUND AND IDENTIFICATION OF THE PROBLEM

In the final analysis, the most important ingredient for the success of an enterprise is its management. Although little confirmed evidence is available on what makes management

successful or unsuccessful, it is accepted as fact that a firm cannot survive without effective management.¹

The above quote was from the Foreword of an initial effort made by Basil to determine what executive development programs for small business exist and to what extent objective measurement of executive training is feasible. Some conclusions he noted include: Of over 600 responding firms, from an original sample of approximately 2,200, only 10.4 percent had formal executive development programs. The largest of the firms surveyed (generally those with over 2,000 employees) averaged 42.3 percent, while medium and small firms (less than 500 employees) rarely had any executive development program. Those firms whose top executives had college training were more likely to have executive training programs. Training beyond college for managers was also less likely in the small firms.

Basil stated: "There is need for research on executive development, particularly on its evaluation, and on what techniques if any can lead to the best possible results."²

William A. Duval, Director of Credit Service Development for Dun and Bradstreet, Incorporated, stated:

The primary cause of failure lies in management weaknesses of the business as these contributed a total of 91.3 percent. This may be a surprise as many diligent students of business statistics attribute the primary cause of failure to the lack of working capital.

We believe that poor management is usually the basic underlying cause. A business that starts with inadequate

¹Douglas Constantine Basil, Executive Development: A Comparison of Small and Large Enterprise (Minneapolis: University of Minnesota, 1964), p. v.

²Ibid., p. 50.

capital or which undertakes a poorly financed, overly optimistic expansion program is demonstrating poor management judgment and will probably not succeed. It is a lack of judgment rather than the lack of capital which is at fault. It has been demonstrated many times that even a concern with the finest plant or store, a meritorious line or product, and a great potential market will not long succeed under poor management.³

In discussing why businesses fail, Mr. Duval explained that getting accurate reasons is difficult, since peoples' motives or reasons for specific actions are "often buried or obscured beyond recall."⁴

Mr. Duval's testimony dealt with business failures, and answered the question of what a failure is, in this way:

Dun and Bradstreet includes in its business failure statistics those businesses that ceased operations after such action as execution, foreclosure or attachment; those who voluntarily withdraw leaving unpaid obligations or were involved in court actions such as receivership, reorganization or arrangement or voluntarily compromised with creditors.⁵

Fowler and Sandberg, in a study of small crop processing firms, made the following statement:

In the analysis of the attitudes of the administrators studied, it became quite apparent that the postulates of rationality generally assumed by the economist as dictating the behavior of the businessman must be tempered in the case of the small business operator. For there is a decided

³U.S., Congress, Senate, Select Committee on Small Business, Small Business Failures: Management Defects Held Largely Responsible, Hearing, 87th Cong., 2nd Sess., June 25, 1962 (Washington, D.C.: Government Printing Office, 1963), p. 10.

⁴Ibid., p. 7.

⁵Ibid., p. 5.

difference between the latter and the professional, or hired, manager; it is submitted that this difference is basic and poorly understood.⁶

Thus they indicated that a distinct difference exists between large and small business managers' attitudes. They later stated:

It is quite obvious that there is absent from among firms in this industry and probably generally among "small" businesses, an appreciation of the basic nature of the administrative process: decision making relative to goals and alternatives.⁷

The above references clearly called for further study, to isolate additional information about management of small businesses in general, and the latter study especially indicated a need for additional study of small agribusiness management.

From a different point of view--that of manpower needs, and development alternatives--other reports have shown other types of information which help set boundaries around the problem being studied. A few examples follow.

According to Goldstein, indications are that service-producing industries are expected to increase from 64 percent in 1968 to nearly 70 percent by 1980. Meanwhile, employment in goods-producing industries will decline as a percentage of total employment, from about 36 percent in 1968 to under one-third by 1980. Mining and production agriculture will decline in actual numbers of

⁶Frank Parker Fowler, Jr. and E. W. Sandberg, The Relationship of Management Decision Making to Small Business Growth (Fort Collins: Colorado State University Research Foundation, Colorado State University, 1964), p. 65.

⁷Ibid., pp. 66-67.

workers. Farm workers are expected to decline by about one-third from 3.5 million in 1968, to 2.6 million in 1980.

A need was expressed in this article for better information on training needs for specific occupations. Local data as a basis for local program planning was recognized as being of greater significance than national data. Expansion and/or changes in content of training programs was mentioned as needed to meet changing skill requirements. Examples included automobile mechanics.⁸ They did not include farm power and machinery repairmen, service-supply store operators, or others who may experience greater changes than automobile mechanics.

In a companion article to the one above, Lawrence took exception to the approach used by Goldstein reporting manpower needs:

In his article Mr. Goldstein divides the U.S. Manpower force into nine major occupational groups: (1) professional, technical, and kindred, (2) managers, officials and proprietors, (3) clerical, (4) sales, (5) craftsmen, foremen and kindred workers, (6) semi-skilled workers, (7) non-farm laborers, (8) service workers, and (9) farm occupations. This implies to most readers that farm occupations only, should be considered as potential employment opportunities for graduates of vocational agri-business programs.

This implication is erroneous. Agricultural educators today have the responsibility of providing programs to meet the needs of persons entering any off-farm occupation that requires agricultural skills and knowledge.

The scope of agricultural education thus goes beyond farm labor occupations to cover the total agri-business

⁸Harold Goldstein, "America's Manpower Needs for the Seventies--Clues to the Tasks Ahead for Vocational Education," American Vocational Journal, XLVI, No. 4 (April, 1971), 18-25.

occupational field, including some occupations in all of the nine major occupational groups except non-farm laborers.⁹

Questions asked by Lawrence which were related to off-farm programs in agriculture included:

What are the tasks vocational educators must accomplish to meet the manpower needs of the total agri-business industries in the seventies? . . . What occupations are included, and what skills and competencies are needed to succeed in these occupations? Which of these can be taught by agricultural educators and which should be left to other educators?

Perimeters must be established around the type of instructional programs that can be achieved by agricultural education and strategies established to get the task underway. . . . The planning and development of instructional programs at the local, state and national levels must be based upon student interests and employment opportunities. . . .

I suggest that this total program of instruction in the agricultural discipline must start at the elementary grades as a part of a career education program for all students, continue through four-year colleges of agriculture, and include continuing education for adults. . . .

Short term specialized instructional programs should be provided in all types of educational institutions for all adults working full time in agricultural occupations who need training or retraining to achieve job stability or advancement.¹⁰

Another companion article by Crum supported the ideas of nation-wide vocational education resources utilized to train every person from child to adult level, and questioning of the use of national manpower projections exclusively. A recognition of the role local resources play in the planning of productive programs was included. A need was identified for increases in programs

⁹C. M. Lawrence, "A Total Program to Meet the Needs of Ag Industry," American Vocational Journal, XLVI, No. 4 (April, 1971), 40.

¹⁰Ibid., pp. 40-42.

meeting needs of increasing numbers within the twenty-five to thirty-five year old bracket of workers, to help upgrade and provide them with capabilities required "to permit young workers with limited experience to move into technical, supervisory, and managerial positions."¹¹

Crum pointed out in this same article that many job titles exist which are not included in Bureau of Labor Statistics listings, and that vocational education supply is not meeting manpower needs in any of the traditional occupation areas. Agriculture was only meeting 56.7 percent of 1971 needs, and agribusiness was only meeting 38.8 percent of 1971 needs. The estimates for 1975 were 48.6 percent and 35.3 percent respectively, indicating that manpower needs in agribusiness are increasing faster than programs are being planned to help meet those needs.¹²

Although it was less up-to-date, a Summary of Research Findings indicated that, as of 1964, almost half of the people employed in off-farm agricultural businesses needed education in agriculture. Needs for additional agriculturally-trained workers were greatest in supplies, sales and services, machinery sales and services, ornamental horticulture services, and livestock and crop food products marketing and distribution. In the future many agricultural subjects taught to students preparing for production farming will also be needed by those

¹¹Dwight R. Crum, "Implications for Planning Vocational Education Resources," American Vocational Journal, XLVI, No. 4 (April, 1971), 26-27.

¹²Ibid., p. 27.

entering off-farm agricultural occupations. Not stopping at entry level, this summary indicated:

State studies uniformly found that advancement within an occupation required a higher average level of competency than was required to gain initial entry. This shows need for continuing adult education.¹³

Along the same trend of thought last expressed, Persons and Copa, discussing the task of vocational educators in estimating potential clientele, stated:

There are seven occupational areas commonly described as areas of responsibility in vocational agriculture. They are agriculture supplies, agricultural mechanics, agriculture products, ornamental horticulture, agricultural resources, and forestry. Some additional miscellaneous categories such as government service, education and agriculturally related services such as credit which are classified as other agri-business form an eighth category.¹⁴

Numbers of workers within each category were estimated, using several sources of figures. They readily recognized, however, that their "number of workers includes persons (in the industries) at all occupational levels such as professionals, managers, clerical workers, craftsmen, and laborers."¹⁵

They further recognized that: "Not every agricultural industry is reported. . . . Neither are the number of persons requiring agricultural competencies defined in this study."¹⁶

¹³Center for Research and Leadership Development in Vocational and Technical Education, Summary of Research Findings in Off-Farm Agricultural Occupations (Columbus: The Ohio State University, 1965), p. 30.

¹⁴Edgar Persons and George Copa, "Have You Counted Your Clientele Lately?" The Visitor [Department of Agricultural Education, University of Minnesota], LIX, No. 1 (January, 1972), 1.

¹⁵Ibid.

¹⁶Ibid.

Their concluding paragraph stated:

It is important to note that the industries listed have come from among a wide variety of categories. While vocational agriculture education may tend to look only to those industries classified as agricultural to find their potential service area, these data illustrate that areas such as manufacturing, transportation, construction and others also contain industries which are agriculturally based.¹⁷

Thus, while several studies have been made of broad clientele potentials for agricultural education programs, none has been located which attempts to identify specific potential clientele for educational programs concentrating on the management competencies required for small, rural, agribusinesses.

From still another point of view--dealing in numbers of people in rural areas, and phase of the problem centered around the rural to urban migration, Gregory had some relevant comments made in a paper presented at a national conference on solving educational problems in sparsely populated areas. Making the distinction between "rural" and "farm," the point was made that about 47 million rural non-farm people outnumbered the approximately 10 million farm population by nearly five to one. Nearly one-fifth, or about 11 million of the total rural population live in poverty.¹⁸

Recognizing the problem of rural to urban migration Gregory stated:

¹⁷ Ibid.

¹⁸ Francis A. Gregory, "Manpower Development Services and the People of Rural Communities" (a paper presented at the National Working Conference on Solving Educational Problems in Sparsely Populated Areas, Denver, Colorado, March 17-19, 1969), p. 2.

. . . The reality must be faced of a continuing stream of city-bound migrants from rural areas until such time as there may be a balance between the supply of indigenous rural manpower and the quantity, range and appeal of rural job opportunities. The immediate problem, then, is to make the present irreversible rural to urban migration a more reasoned and efficient process. Almost simultaneously the longer range and broader programs of economic development of rural areas must be mounted.¹⁹

While Gregory was referring to the national situation, he was speaking about a world-wide phenomenon. Even in developing countries, those who spend time enough in a local community to observe migratory trends quickly become aware of this rural to urban movement of large numbers of people. It is not different in Michigan. A study of the population as shown in census figures for 1960 compared with 1970 gives a general view of the changes taking place in the distribution of the population. Table 1, showing breakdown of population in groups of places according to size, illustrates this point.

Although rural totals increased by over 237 thousand in the decade between 1960 and 1970, the urban fringe increased by nearly 852 thousand during the same period. Not only were people moving into the urban fringe (or being absorbed by it), but the numbers of places in urban fringe areas increased while the number of rural places actually declined slightly, with more in the 1,000 to 2,500 population size, and fewer in places of less than 1,000.

Even though the migration from rural to urban exists in Michigan, it is not reducing the total rural residents. In fact the actual numbers of people in rural territory increased substantially,

¹⁹ Ibid., p. 4.

Table 1. Population of Michigan, By Size and Place: 1970 and 1960.

Locations	1970			1960		
	Places	Population	Percent of total population	Places	Population	Percent of total population
Urban fringe	107	3,190,780	36.0	78	2,338,891	29.8
Urban totals	245	6,553,773	73.8	207	5,739,132	73.4
Rural places of 1,000 to 2,500	154	247,370	2.8	150	240,753	3.1
Rural places of less than 1,000	189	101,547	1.1	196	104,129	1.3
Other rural	...	1,973,383	22.2	...	1,739,180	22.2
Rural totals	343	2,321,310	26.2	346	2,084,062	26.6
State totals	588	8,875,083	100.0	553	7,823,184	100.0

Source: U.S., Bureau of the Census, U.S. Census of Population: 1970, Number of Inhabitants, Final Report PC(1)-A24 Michigan (Washington, D.C.: Government Printing Office, 1971), pp. 24-28.

indicating increased needs for educational programs in rural areas. To support increased educational offerings, economic growth in rural areas is needed. Not only are economic expansion and increased educational programs needed, but there is a growing concern for the quality as well as quantity of changes required in rural areas.

People from several vantage points have recognized needs for change in our society, its education system, and its relative values. Although referring to many types of organizations, Lippitt perhaps summed up the situation as well as any general statement could:

I feel that at no time in my lifetime has there been more need for organization renewal. The need for organizations to re-examine their objectives, review their structure, improve their relationships, and to rediscover their responsibility to their members, clients, or employees is very evident. The organization that will remain viable, creative and relevant must engage in the process of search that the renewal effort involves. Such renewal will not take place by chance. It must be a purposive effort that embodies more than good intention. An organization renewal process takes time, energy, money, and skill.²⁰

More directly aimed at educational change, and pulling together thoughts expressed by some of our nation's leaders, the U.S. Office of Education made reference to action of the Congress in the Vocational Education Act of 1963, whereby it was proposed that all people, throughout our country, "should have access to vocational education based upon individual needs, interests, and abilities."²¹

²⁰ Gordon L. Lippitt, Organization Renewal Achieving Viability in a Changing World (New York: Appleton-Century-Crofts, Education Division, Meredith Corporation, 1969), p. vii.

²¹ U.S., Department of Health, Education and Welfare, Office of Education, Vocational Education: The Bridge Between Man and His Work, OE-80053 (Washington, D.C.: Government Printing Office, 1968), p. 3.

Among the "imperative educational needs" enumerated by the National Advisory Council on Vocational Education, as reported by the same source, were:

A reorientation of values is needed to satisfy a new set of closely interwoven functions. The opportunity must be provided to improve the individual's employment status and earnings and to help him adapt to a changing economic environment and an expanding economy.²²

The same source indicated that only three dollars of federal expenditures per enrollee went for adult programs in fiscal year 1966, while sixty dollars per enrollee went to post-secondary, and nineteen dollars per enrollee went to secondary school programs. Educational appropriations have been noted to be too small to carry out proposed programs, and are also small in comparison with other federal programs.²³

In his discussion of Agricultural Education Curriculum Development, Hensel referred to the same seven categories identified earlier as being the responsibility of vocational agriculture. Stating that having already been adapted by the Department of Health, Education and Welfare for reporting purposes, "it becomes imperative that curriculum guides and programs of curriculum content be developed."²⁴

²²Ibid., p. 4.

²³Ibid., p. 7.

²⁴James W. Hensel, "A Planning Study to Determine the Feasibility of a Research Project Concerning Employment Opportunities and Training Needs in Farming and Off-farm Agricultural Business and Industry," Final Report and Proposal for Research (Columbus: The Ohio State University, Center for Vocational and Technical Education, July, 1968), p. 7.

Rules and regulations under which each state must operate, if they are to qualify for reimbursement from federal monies, include the following:

Paragraph 104.60 Vocational Education in Agriculture.

Vocational education in Agriculture under the state plan shall be designed to meet the needs of persons over 14 years of age who have entered upon or are preparing to enter: (a) Upon the work of the farm or farm home, or (b) Any occupation involving knowledge and skills in agricultural subjects, whether or not such occupation involves work of the farm or of the farm home.

104.61 Agricultural Occupations defined.

An agricultural occupation means an occupation involving knowledge and skills in agricultural subjects, which has the following characteristics:

- (a) The occupation includes the functions of producing, processing, and distributing agricultural products and includes services related thereto.
- (b) The occupation requires competencies in one or more of the primary areas of plant science, soil science, animal science, farm management, agricultural mechanization, and agricultural leadership.²⁵

Paragraph 104.13 concerning all vocational education programs and services gave specific support to studies of occupational needs for proposed training programs:

The following standards will be followed to assure soundness and quality of instruction designed to fit individuals for an occupational objective:

- (1) The program of instruction will be based on a consideration of the skills and knowledge required in the occupation for which the instruction is being provided, and include a planned logical sequence of those essentials of education or experience (or both) deemed necessary for the individual to meet his occupational objectives.
- (2) The program of instruction will be developed and conducted in consultation with potential employers and other individuals or groups of individuals having skills in the substantive knowledge of the occupation or occupational field representing the occupational objective.

²⁵U.S., Office of Education, Vocational Education Bulletin Number 1, Administration of Vocational Education--Rules and Regulations (Washington, D.C.: Government Printing Office, 1966), pp. 17-18.

- (3) The program of instruction will include the most up-to-date knowledge and skills necessary for competencies required in the occupation or occupational field in which the individual is being prepared or upgraded or updated.
- (4) The program of instruction will be sufficiently extensive in duration and intensive within a scheduled unit of time to enable the student to develop competencies necessary to fit him for employment in the occupation or occupational field for which he is being trained.
- (5) The program of instruction will combine and coordinate related instruction with field, shop, laboratory, cooperative work, or other occupational experience which (i) is appropriate to the vocational objectives of the students, and (ii) is of sufficient duration to develop competencies necessary to fit him for employment in the occupation or occupational field for which he is being trained, and (iii) is supervised, directed, or coordinated by a person qualified under the state plan.²⁶

Hensel identified the following objectives for Vocational and Technical Education in Agriculture as quoted from U.S. Department of Health, Education and Welfare OE-81011, Bulletin 1966 No. 4:

- 1. To develop agricultural competencies needed by individuals engaged in or preparing to engage in production agriculture.
- 2. To develop agricultural competencies needed by individuals engaged in or preparing to engage in agricultural occupations other than production agriculture.
- 3. To develop an understanding of and appreciation for career opportunities in agriculture and the preparation needed to enter and progress in agricultural occupations.
- 4. To develop the ability to secure satisfactory placement and to advance in an agricultural occupation through a program of continuing education.
- 5. To develop those abilities in human relations which are essential in agricultural occupations.
- 6. To develop the abilities needed to exercise and follow effective leadership in fulfilling occupational, social, and civic responsibilities.²⁷

The opening sentence by the Michigan State Board of Education in their foreword stated: "This Annual Descriptive Report of the Michigan Program of vocational-technical education tells the story of

²⁶Ibid.

²⁷Hensel, op. cit., p. 6.

unprecedented growth during the past year." This statement gave a very false impression of the facts relative to agriculture reported by the Division of Vocational Education in its Annual Report for FY 1967.²⁸

In that report only 1,084 Adult Farmer (Supplementary) Secondary enrollees were reported, along with 287 Young Farmer (Preparatory), and 265 total enrollees in nine different post-secondary programs in varying aspects of Agriculture Education in the entire state of Michigan. Of those, only four programs dealt directly with management of agriculturally related businesses. Enrollments in both young and adult farmer programs declined that year, due (according to the report) to "a shortage of teachers and increased teacher load."²⁹

In fact, as late as 1971, Dr. John W. Porter recognized that about two million residents do not have access to suitable adult education. Calling for development of courses aimed at "the everyday, ordinary people," Porter said: "We must do this with as much or more zeal and zest as we use to put a star athlete into college."³⁰

Not only was adult education for Michigan residents inadequate, pre-entry occupational training was woefully inadequate to meet needs of youth and/or industries for which they may work.

²⁸Michigan, State Board of Education, Annual Descriptive Report of the Division of Vocational Education (Lansing: Department of Education for the Fiscal Year ending June 30, 1967), p. i.

²⁹Ibid., p. 15.

³⁰"Adult Education Backed," State Journal [Lansing, Michigan] April 28, 1971, Sec. A, p. 15.

Definition of the problem leading to the policy statement and plan for the development of area vocational education centers in Michigan included the following statement:

. . . only one out of six students is receiving occupational preparation for gainful employment, while 75 percent of all ninth grade students enter the labor market at or before high school graduation. In addition, 27 percent of Michigan's students drop out of school before graduating; most of them with little or no job preparation.³¹

In 1970 the following guiding principles for Vocational Agriculture Curriculum change were noted by the Michigan Department of Education:

The occupational needs of the persons receiving instruction should be considered first when planning new and improved vocational-technical education programs . . . Where possible, instruction should be given in local high schools, area schools, junior colleges, community colleges and other such institutions so that all students who desire may have the opportunity to enroll. . . . Schools should provide a cooperative-type occupational training program as one means for giving specific training to help selected students acquire the necessary skills, abilities and understandings to succeed in a variety of non-farm agricultural occupations. . . . It should be recognized that training for non-farm agricultural occupations is not the exclusive concern of the teacher of vocational agriculture. Teachers of many other high school subjects have substantial contributions to make to the career preparation of workers in non-farm agricultural occupations. . . .

Competencies and understandings in agriculture needed by workers in non-farm agricultural occupations should be considered when selecting and developing units for the course of study in vocational agriculture.³²

³¹ A Tentative Plan for the Development of Area Vocational Education Centers in Michigan (Lansing: Michigan Department of Education, 1970), p. 2.

³² A Guide for Preparing Courses of Instruction in Vocational Agriculture in Michigan, Bulletin No. 2151 (rev. ed.; Lansing: Michigan Department of Education, 1970), pp. 3-5.

In addition to guidelines, selected competencies were listed which were suggested for inclusion in training programs, some of which were managerial in nature, and similar to those identified by others and referred to later in this study.³³

In defining higher education, the Michigan State Board of Education included all post-secondary education, including "the broad area of vocational-technical education leading to skills or technical abilities."³⁴

The State Board further defined Vocational-Technical Education as being:

. . . made up of occupational, vocational-technical, and apprentice programs taught primarily in the community colleges, proprietary schools, and certain baccalaureate institutions where they usually do not lead to a baccalaureate degree. There is every indication that a great need exists to expand, substantially this sector of higher education.³⁵

Probable trends in employment for future years were discussed, in light of manpower need studies which projected Michigan's changing trends.

In 1960, according to the Michigan Manpower Study, the largest number of people based upon a 12-classification format, were employed as operatives, craftsmen, clericals, professionals, and managers, in that order. It is projected that by 1980 the order will have changed . . . with the greatest average annual rate of increase in employment from 1960 to 1980 to be in the professional, service, clerical, managerial and sales occupations. . . .³⁶

³³See pages 131-35 for details on required managerial competencies.

³⁴State Plan for Higher Education in Michigan (rev. ed.; Lansing: State Board of Education, February, 1970), p. I-9.

³⁵Ibid., p. I-10.

³⁶Ibid., pp. II-21-22.

In setting down guidelines for the planning, administration and conduction of agricultural education programs, the consultants on Agricultural Education in the U.S. Office of Education said the primary objectives included:

- . . . 3. Assist in developing special and innovative agricultural career programs. . . .
- 4.
- 5. Improve the efficiency of the agricultural industry by helping develop the agricultural competence and leadership of its managers and employees.
- 6. Strengthen ancillary services especially teacher education, supervision, and research.³⁷

Describing the present situation, the consultants stated:

It was not until this present decade that federal legislation was passed to expand agricultural education to include preparation for off-farm agricultural occupations. . . . For the first time curriculum researchers attempted to identify, on a large scale, those competencies and skills needed by workers in off-farm agricultural sectors of the economy. Out of necessity the cluster concept was conceived as a sound approach to teaching knowledge and skills common to a family of agricultural occupations.³⁸

In reference to the training of teachers, the consultants indicated that, due to such factors as expansion of kinds and levels of programs, there is presently a critical deficit of teachers qualified to prepare students for off-farm agricultural occupations.³⁹

They went on to discuss the implications of this deficit, stating that: "in essence . . . agricultural education will be training only about one-sixth of the manpower needed by the industry of agriculture in 1974."⁴⁰

³⁷ Agricultural Education Committee of Office of Education Consultants on Agricultural Education, Guidelines for Developing Programs in Agricultural Education for the 1970's (Washington, D.C.: Office of Education, Department of Health, Education and Welfare, 1970), pp. i-ii. (Xeroxed.)

³⁸ Ibid., p. 5.

³⁹ Ibid., p. 7.

⁴⁰ Ibid., p. 8.

In light of the above statements, the following pertinent guidelines were put forward for consideration by those planning for agricultural education for the future:

State staffs for agricultural education must exert leadership and accept responsibility for initiating and developing programs to provide post-secondary students with opportunities for quality training in agricultural education. . . . Representatives of agriculture and business must be actively involved in program planning and evaluation. . . . An adequate supply of capable teachers with appropriate technical and professional training is essential to the success of the program. . . . Appropriate education in agriculture should be provided for all persons who desire and can profit from such education. . . . Teacher education and state supervisory staffs should recruit, prepare, and update personnel specifically for developing programs for out-of-school youth and adults. . . . Curriculums should be relevant to the individual needs of the students. . . . Inservice programs should be based on essential professional and technical competencies. . . . Agricultural education should accept responsibility for providing curriculum development and educational media services for the programs.⁴¹

With recognition of the need for change being so widespread, and dating back in some cases over ten years, it is nevertheless difficult to search out concrete evidences of any concerted efforts, especially in Michigan, for proposed solutions to the problem. A few serious efforts have been reported from other states. While they cannot be directly applicable to Michigan conditions, they do imply types of educational programs which may succeed in Michigan. Some, however, point out inadequacies of programs tried in other places. By careful selection of components from those which apparently were successful in other settings, and avoiding repetition of those types of activities which did not work as hoped, some proposals for trial in Michigan can be made.

⁴¹Ibid., pp. 11-25.

In one program in Tennessee, industry, public education and government agencies combined to demonstrate that industrial workers could be economically and profitably trained by modern means in less than one year.⁴²

In a Kentucky study:

Results of the analysis of 233 Employment Service Records show that the use of MDTA funds for Farmer General and Farm Hand General Training was a good educational investment. . . . Though both . . . courses are considered as being good educational investments, Farmer General Training was the better investment of the two. . . . The in-depth analysis indicates that the cost of MDTA Farmer General Training is realizable within three years after the training. Another financial benefit, which could not be compiled, resulted from the Farmer General Trainees' neighbors sharing in the knowledge that the trainees gained during the course.⁴³

Gough and Rowe concluded that since training costs were realized in three or less years following training, that similar future programs may be good investments. They also suggested that additional courses of these types could not only alleviate the rural poverty problem, but would also reduce the urban poverty problems of the future, by reducing the rate of migration of rural poor people to urban areas.⁴⁴

⁴²Training and Technology: A Demonstration Manpower Development Project Worker Training Program, Phase I, Final Report (Oak Ridge Associated Universities, Tennessee, May, 1969), pp. 1-74.

⁴³Lowell A. Gough and Harold R. Rowe, A Study of Factors Associated with Outcomes of MDTA Agricultural Education Projects in the Somerset Area, Final Report (Lexington: Kentucky Research Coordinating Unit, 1968), p. i.

⁴⁴Ibid.

A South Carolina study, evidently broader in scope than the one in Kentucky, indicated that most MDTA programs would be able to "break even" if average ages of students were sixty years of age. Most participants, however, were nearer to thirty or forty years of age, giving twenty to thirty years of profitable investment returns from education expenditures of the types involved. Some programs, however-- notably a non-managerial type of training for Landscape Gardeners-- showed expected earnings to be less than training costs for all ages of students.⁴⁵

In contrast to results of the studies in Tennessee, Kentucky and South Carolina, which included training for managers and self-employed individuals, a three-state study interim report concluded that "no marked increase in available jobs is evident."⁴⁶ Thus, the approach had not met its objectives entirely, since two of the pilot program objectives evaluated had been: (4) demonstrating that occupational education programs can significantly increase employment opportunities; and (5) demonstrating that a cooperative occupational effort based on local involvement will result in continuing community development.⁴⁷

⁴⁵A Benefit Cost Analysis of the South Carolina MDTA Program, Preliminary Report (Columbus: South Carolina University, Bureau of Business and Economic Research, 1965), pp. 1-64.

⁴⁶Eugene B. Griessman (ed.), The Concerted Services Approach to Developmental Change in Rural Areas: An Interim Evaluation Center, Research and Development Report No. 1 (Raleigh: North Carolina University, 1968), p. 118.

⁴⁷Ibid., pp. 128-30.

Although six federal agencies joined with state and local groups, to concentrate on one county in each of three states and did improve some conditions by their joint efforts, they (as others have) missed management training as a requirement for community development.

While not wholly successful, the report indicated enthusiastic support for such efforts, in light of benefits derived, and favorable results:

Experience to date with the pilot projects has shown that federal and state agencies working together can effectively bring educational training opportunities to rural residents. This approach provides an effective means for introducing new programs, such as training programs for welfare recipients under title V of the Economic Opportunity Act, the expansion of the Farm Labor program to include logging, and the HRD program of the public employment service. High priority should be given to extending this promising new approach. The nation can ill afford to let the disadvantaged residents of rural areas remain unassisted. It is inconsistent [sic] with an expanding economy to permit this vast source of potential manpower to remain untapped. The manpower policies and techniques that are being developed in the Concerted Services program offer new hope to rural America.⁴⁸

Another reference to the success of the joint effort approach stated:

After a year and a half of operation of the CSTE [Concerted Services for Training and Education] pilot projects, a large measure of success has been attained. Approximately three times as many people in the pilot counties are participating in the new federal aids to training and education as in other rural counties.⁴⁹

An opinion, supporting the concept of increasing employment opportunities in rural areas through training for rural business managers was expressed as follows: "The philosophy of the present

⁴⁸Ibid., p. 15.

⁴⁹Ibid., p. 135.

coordinator [of Todd County, Minnesota] is that it takes more than training to get a job. Employment opportunities must also be present."⁵⁰

One study by Warren et al. was related to evaluation of a management training program for managers of one specific type of off-farm agribusiness--namely Farm Supply Dealers. It more closely approached the type of training for across-the-board agribusiness management training for small rural agribusiness managers, than did any other study identified. Therefore, considerable detail was involved in reporting on this study.

An introduction to the educational phase of the study was as follows:

The educational phase of this project consisted of planning, organizing and implementing an intensive training program for 10 local retail farm supply and marketing dealers who sold fertilizer and agricultural chemicals. Intensive training was given in the areas of business management, merchandising and product information. The research phase included setting up the experimental design, designating the participating and control dealers and measuring the influence of this training upon the manager and his business firm.⁵¹

The training consisted of one five-day workshop, followed by sixteen training meetings over a two and one-half year period. The meetings ranged from 3 to 12 hours in length, and the total training program covered about 140 hours of instruction.

⁵⁰ Ibid., p. 118.

⁵¹ Richard D. Warren et al., The Experimental Dealer Training Program, Changes in Knowledge; Attitudes and Performance of Farm Supply Dealers, Changes in Business Firms, Rural Sociology Report No. 55 (Ames: Iowa State University of Science and Technology, 1967), p. 2.

Changes brought about by the training program, and analyzed included:

. . . 1) managers knowledge, 2) managers attitudes, 3) managers performance, 4) internal environment and activities of the business firm, and 5) economic returns to the entire business, the fertilizer department and agricultural chemicals department . . .

The major objective of this report is to determine the effectiveness of an intensive training program in bringing about predicted behavioral changes in the dealer and changes in those areas of his business firm where the manager or owner-manager plays a major role in the decision making . . .

The emphasis will be placed on operational management and the outcomes for the business resulting from operational management. Although the division of managerial responsibility and internal environment may vary according to the economic structure, there is a common area in operational management.⁵²

Several thoughts relative to the learning process were included in this study, which are briefly summarized here: If the assumption is made that behavioral changes in human beings are desired outcomes of education or training, then the assumption must first be made that some behavior is learned from others or from the environment. However, no one theory can be stated as the basis for learning.

Likewise, no one theory exists about the function of management, although many are studying the subject, as expressed by Warren et al.:

The contributions to an ultimate theory about organizations are coming from many diverse fields. Some of these fields include management science, operations research, psychology, anthropology, sociology, political science, social psychology, mathematics, economics, statistics and management itself. People in all of these fields are conducting research about organizations, or some aspects of behavior in organizations, or organization activities. However, at the present time an integrated or unified theory does not exist which could be used to generate hypotheses about management.⁵³

⁵²Ibid., p. 23.

⁵³Ibid., pp. 65-66.

In their conclusions, many and varied types of influences, conditions and factors were discussed by Warren et al. which may have accounted for the lack of statistically supported hypotheses as to the benefits derived from manager participation in the training program. The "adequacy" of the training was questioned: "Perhaps with larger sample size and more precise measures, a more specific conclusion to the question of adequacy could be reached."⁵⁴ However, based upon descriptive statistics and discussion of the findings, "it appears that a slight trend in favor of the treatment general managers does exist."⁵⁵

Suggestions for future research included: " . . . 4) characteristics of general managers which lead to successful operational management in business firms, and 5) the development of more precise measuring devices and instruments."⁵⁶

While limited in scope, and of somewhat questionable significance according to their criteria, the study by Warren et al. was very helpful background for the study being reported upon.

Even more pertinent were remarks made by Harold Binkley, who spoke directly to the problem of providing training for diversified participants in the instructional programs proposed for secondary school students, when he said:

Diversified and individualized instructional programs in agri-business is one of the major challenges we have not met. . . . We must develop ways to meet a wide variety of occupational objectives, in agriculture, in the same class. I should like to discuss with you the need for diversified

⁵⁴Ibid., p. 314.

⁵⁵Ibid., p. 310.

⁵⁶Ibid., p. 314.

and individualized instruction programs in vocational agri-⁵⁷
culture and a conceptualized model for such a program . . .

Dr. Binkley went on to point out that there are thousands of school districts or local communities with needs for improved educational offerings which utilize the "total agricultural resources of the community." He pointed out that in any one community, of 3,000 to 5,000 population agricultural training resources might include many and diverse opportunities such as farming, an SCS office, a butcher shop, an agricultural machinery business, and a milk processing plant, among others.⁵⁸ While his specific reference was to a size range slightly larger than those of communities included in this study, many of the same types of resources exist in the smaller communities of under 2,500 population as well.

In his model, Dr. Binkley indicated a need for a complete local survey of the agricultural and related resources, in order to identify "training possibilities." Making the point that since this community is where students are, that is where training should be conducted, he referred to secondary school students' needs exclusively. However, the same types, or closely related needs are also present for adults and out-of-school youth. Binkley indicated that once the training had been provided in the local community, the former students could move to where jobs exist.⁵⁹ He did not, due to the restricted

⁵⁷Harold Binkley, "Diversified and Individualized Instructional Programs in Agri-business" (paper presented at the Central States Seminar in Agri-business Education, Chicago, Illinois, February 9, 1971), p. 1. (Mimeographed.)

⁵⁸Ibid., p. 2.

⁵⁹Ibid., p. 3.

topic being discussed, even imply that jobs might be provided locally, if training programs meeting the needs of all community residents were provided.

In his concluding remarks, Dr. Binkley stated:

Obviously, as a professional group of teacher educators, supervisors, and teachers we have a long way to go. We must prepare teachers to manage the agricultural resources of the community in developing and operating individualized instructional programs; we must develop instructional materials which will meet the diversity of agricultural occupations in the various communities; and we must sharpen our concepts and understandings as to where the training leads to.⁶⁰

In reviewing literature on the topic of citizen participation in educational planning McKinney cited references to specific involvement in advisory, administrative, and policy making capacities by local citizens from early days in the evolution of schooling in the United States. Specific references to vocational education citizen participation were identified which date back to 1911. An early Vocational Education Law approved in Indiana in 1913 made specific reference to the duties of citizens advisory committees consisting of representatives of trades, industries and occupations, as consultants and advisors to those who managed and supervised the schools.

McKinney stated an assumption which underlies one of the basic premises of this study--that private, local citizens are interested and willing to take part in educational planning and management.

Without question laymen are interested in their school. Their willingness to help in the performance of the educational process has been demonstrated many times. Local school officials should find this a most desirable situation. If we accept the

⁶⁰Ibid., p. 9.

fact that public schools owe their origin to the public it quickly becomes evident that schools need the confidence of the public they represent.⁶¹

The need for lay participation in vocational education management was recognized by the American Vocational Association (A.V.A.) in the following statement:

. . . training young people and adults is a cooperative undertaking shared by the school and the community. In order to carry its share of the burden, the school must know what the people need and want--and before the people can support the work of the school, they must know what is being done.⁶²

Adding support for Citizen Advisory Committee use in Vocational Education Programs, Shoemaker stated that " . . . involvement of a community in vocational education is not just a nice gesture; it is a matter of life and death to a sound program."⁶³

Hull concurred with this comment, " . . . it is when citizens eliminate educators or when educators eliminate citizens that the real mistakes in educational planning are made."⁶⁴

The importance of lay participation was noted by the Committee of 14 of the New York Metropolitan School Study Council when it stated:

⁶¹Floyd Lee McKinney, "Citizens Perceptions and Professional Education Expectations Regarding the Vocational Citizens Advisory Committee" (unpublished Ph.D. dissertation, Michigan State University, 1969), p. 14.

⁶²Vocational Advisory Committees (Washington, D.C.: American Vocational Association, 1950), p. 3.

⁶³Byrl Shoemaker, "Involving the Community in Needs Studies and Program Development," The National Association of Secondary School Principals' Bulletin, XLIX (May, 1965), 113.

⁶⁴J. H. Hull, "Help the Board's Advisory Committee Know Its Place," School Executive, LXXIII (June, 1954), 62.

There is mounting evidence to show that wherever schools have drawn the public into processes of planning, policy formation, discussion of objectives and methods to meet those objectives, such schools have been superior to what otherwise might have been expected.⁶⁵

There is general agreement by education leaders throughout the nation that use of citizens (laymen) on advisory councils or committees is an advisable practice.

Adding ideas from other educational disciplines when planning agricultural education programs has been recommended earlier.⁶⁶ Since many of the non-farm agribusinesses in rural communities are also served by distributive education programs, it is logical to adopt or adapt ideas found to be useful in D.E. programs when planning agricultural education offerings for non-farm agribusiness personnel.

Peck and Denman, in reporting results of their study concerning opinions of businessmen about the relative importance of subject matter for training programs for their employees included the following:

The general subject areas of greatest importance in marketing and distribution type jobs are job and product knowledge, human relations, personal characteristics (excluding human relations), communications, and mathematics. In addition, there are 2 specific subjects of great importance: salesmanship and internal organization relations.⁶⁷

⁶⁵Norton Beach, Public Action for Powerful Schools (New York: Metropolitan School Study Council, 1949), p. 60.

⁶⁶See page 31 for a quotation from Bulletin No. 2151 by the Michigan Department of Education.

⁶⁷Charles E. Peck and F. L. Denman, Survey to Determine Appropriate Occupational Programs in the Field of Distributive and Marketing at Various Levels of Education, Final Report, Vol. I, Relative Importance and Preparation for Distributive Education Subject Area (Seattle: Washington University, January, 1968), p. 87.

It is interesting to note that, even for the lower levels of jobs being considered, such areas within the management function as "human relations," "communications" and "internal organization relations" were considered among those of greatest importance.

Participation in record analysis, and interpretation training programs, has been available to farm managers in several states for many years through public supported programs. Some have been under land grant college extension programs, while others have been developed with vocational and/or veterans Institutional On-the-Farm Training (I.O.F.) program involvement. In studying one of these programs, Persons and Swanson cited Cvancara who evaluated the economic effects of enrollment of a farm family in an adult farm management program. Reporting on thirty-three matched pairs of participants and non-participants, he noted that increased cash income accrued at an increase rate of about \$500 for each year of participation in the adult farm management program.⁶⁸

In their reference to Cvancara's work, Persons and Swanson stated:

Although the small number of farms studied limits the usefulness of the report, it is the first significant research which strikes at the micro-economic aspects of the educational investment.

In brief, the study showed that participation in adult education was still another way to increase income. Because

⁶⁸ Joseph G. Cvancara, "Input-Output Relationships Among Selected Intellectual Investments in Agriculture" (unpublished Ph.D. dissertation, University of Minnesota, 1964), as cited by Edgar A. Persons and Gordon I. Swanson, Educational Restrictions to Agricultural Success and the Relationship of Education to Income Among Farmers (Minneapolis: University of Minnesota, 1966), p. 10.

of the high dollar return to the cooperator, one can assume that this type of instruction was a profitable input.⁶⁹

In their study involving Institutional On-Farm Training programs for Minnesota veterans of military service, Persons and Swanson made the following statement:

. . . findings in this study, suggests that it is probable that the length of time a veteran was enrolled had a positive effect upon income. The passage of time since training was discontinued has nullified any marginal gain in income potential caused by the longer training periods. The evidence points to the fact that there is a constant need for continuing programs of instruction when the subjects have had little formal schooling, and particularly in an industry that is marked by rapid upward changes in productivity promoted by a rapidly expanding pool of technological information. . . . Attention should be focused on adult instruction as a means of improving farm incomes for those who have had little prior educational opportunity, and for constantly upgrading the competencies and skills of those who have had more extensive vocational training. It is feasible that the adult education programs most economically suited to improve income will be geared in part to the prior training the participant has received.⁷⁰

Persons and Swanson suggested that an instructional program, "similar in design to the I.O.F.T. program as exemplified by the Minnesota Farm Management Program in vocational agriculture," may serve as a model for intensive education needed to supplement a limited formal school background or a lack of preparation in entrepreneurial skills.⁷¹

In relation to a similar program for non-veterans as well as veterans who chose to participate, in a study of the economic cost-benefits of a farm business and resource management instructional

⁶⁹Ibid.

⁷⁰Ibid., pp. 109-10.

⁷¹Ibid., p. 110.

program involving 3,518 business records from 1959 through 1965, the following was revealed by Persons and others:

- (1) Farmers involved in the type of business record analysis and business management instruction program under study, can be expected to realize about four dollars in labor earnings for each dollar invested in education;
- (2) About 2:1 is the ratio of benefits to the community as an aggregate rise in farm labor earnings when the community aggregate cost was considered. Where the cost included farm sales as a measure of business activity the ratio was 9:1;
- (3) Diminishing marginal return effects were observable in educational investments;
- (4) There were irregular rates of increases in returns from year to year, over the eight years studied;
- (5) A well organized, goal directed and "highly structured" program of instruction in farm business management proved to be an effective and profitable investment.

Only tangible, direct benefits of measurable financial nature were included. If the improved tax base, and non-monetary influences on the participants, and indirectly upon the community were to be included, the benefits would be much greater than reported.

The following opinion expresses the authors' enthusiasm for the program: "The results indicate that no agricultural community can

afford to be without an educational input that will yield as high a return on the investment as is demonstrated in this analysis."⁷²

In another approach to evaluate the effects of education of farmers on economic returns, Rolloff used two criteria to establish significant measures of economic efficiency; (1) usual measures of farm business management efficiency, and (2) variables judged by experts as significant for success. The variables used were: gross income, net worth, net margin, operating ratio, overhead ratio, gross income per \$1,000 invested, net farm income per \$1,000 invested, gross income per man equivalent, and productive man work units per man equivalent.

Class time, farm management consultation at the school, and on-farm instruction were used as a basis for determining educational inputs. These were regularly reported by teachers, judged by experts as being potent variables, and could be assigned monetary values per unit.⁷³

Rather than dealing with techniques and concepts or competencies required for success, outcomes in economic returns were measured. Since other values and standards besides productivity per man work unit, and financial gain often enter into managerial decision making,

⁷²Edgar A. Persons and others, Investments in Education for Farmers: Summary of an Economic Study of the Investment Effects of Education in Agriculture (St. Paul: University of Minnesota, 1968), p. ii.

⁷³John A. Rolloff, The Development of a Model Design to Assess Instruction in Terms of Economic Returns and the Understanding of Economic Principles (unpublished Ph.D. dissertation, The Ohio State University, 1966), p. 43. (ED 024 806)

these measures are only part of the measurement of success of management. No determination was made relative to what managerial practices resulted in the outcomes used as measures of success. This study again apparently ignored the major concept, that knowledge of attitudes about, and ability to use combinations of many managerial concepts result in economic success. Which of those many managerial concepts and/or competencies are most important, or essential for the successful achievement of economic goals and objectives was still undetermined, as were those required for achievement of other goals and objectives of non-economic nature.

Coming closer to the identification of specific concepts and/or competencies required for successful management, Orley Gunderson and others found that:

Managers needed high levels of competency in the competency factors of business management and economics, and employee traits and job responsibilities. Medium levels of competency were needed in the competency factors of plant science, animal science, repair and maintenance of facilities and equipment, feed and seed sales and service, and office skills and practices. A low level of competency was needed in the competency factor of agricultural mechanics.⁷⁴

In an attempt to identify sources of training for employees, Gunderson and others reported:

Store managers of cooperative agricultural supplies stores indicated that regional specialists in agricultural mechanics, livestock feeds, fertilizer, seed and agricultural chemicals held formal product knowledge and sales skills classes at

⁷⁴Orley Gunderson and others, An Analysis of Occupational Titles and Competencies Needed in Off-Farm Agricultural Supplies Businesses, Teacher Education Research Series, Vol. 7, No. 2 (Harrisburg: Pennsylvania State Department of Public Instruction, June, 1966), pp. 58-59.

intervals throughout the entire year and usually gave informal instruction during their weekly, bi-weekly, or monthly visits. Employees were also found to be receiving on-the-job training from the store manager and/or production manager. Various employees were sent to special product knowledge and sales skills courses conducted by the cooperative stores headquarters. The special courses ranged in length from one day for truck drivers to a week or several weeks for managers, fieldmen, and salesmen. Employees were also encouraged to attend cooperative extension meetings that were pertinent to their occupational duties.⁷⁵

Whereas the above study was an initial start towards identifying specific competency areas within the management function, as a basis for teacher education, it was in fact only a beginning. Broad areas were determined to be of relative importance, but specific concepts within those areas were not studied in detail. Furthermore, this study was restricted to a limited type of agribusiness, and is not generalizable to any and all types of Michigan's small, rural agribusinesses.

In a study of four high school districts in Pinal County, Arizona, agricultural business management competencies were found to be needed by 25 percent or more of respondents in specific selected job titles including not only normally considered managerial positions but such jobs as farm equipment and supply salesmen, farm supply plant worker, fertilizer and insecticide salesmen, farm equipment servicemen, ginner, cowboy, and ditch rider.⁷⁶

⁷⁵Ibid., p. 71.

⁷⁶James B. Hamilton and others, Occupational Opportunities and Training Needs for Agricultural Employment in Selected Areas of Arizona, Report 262 (Tucson: Agricultural Experiment Station, University of Arizona, 1970), p. 26.

When clustered according to desired Educational Level by employers, 7 of the Manager-Foreman Cluster were desired with less than high school graduate, 144 with high school graduate, and 141 with more than high school graduate levels of training for initial employment at that specific job.⁷⁷ This appears to be a clear indication that management training is needed at both secondary and post-secondary levels. Nearly one-fourth of the full-time agricultural employees in the county were in one or more of the owner-manager, manager or foreman levels of employment.⁷⁸ It should be noted, however, that this study did not include all job titles requiring agricultural competencies--merely those found in the four school districts studied. Numerous job titles would undoubtedly be identified in other locations. The fact that several job titles not normally considered as managerial in nature required agricultural business management competencies suggests that the potential clientele for training programs in agribusiness management might be substantially larger than those in exclusively managerial jobs in any one community.

Although no one proposal, from any of the sources referred to thus far may entirely fit a specific local need (without adaptation), many ideas from several of the cited sources may be applied in various combinations to meet local needs. Since both preservice and inservice training is obviously in need of some major changes in approach

⁷⁷Ibid., p. 32.

⁷⁸Ibid., p. 41.

to meet agribusiness educational needs of the future, no alternatives which have any prospects of potential success should be overlooked. If one concept doesn't appear to be useful for adults (in-service) training, it may meet secondary school (preservice) training needs, or vice versa.

MANAGEMENT FUNCTION APPROACH TO PLANNING OCCUPATIONAL TRAINING

It is, evidently, only within very recent years that the Function of Management as a separate discipline has been recognized in agribusiness training programs. As late as 1969 Clark and others reported that functions of industry had been defined "as the fundamental things that must be done somewhere in the industry in order for the industry to survive." They listed processing, sales, service, office practices, public relations, purchasing, transportation, research, and maintenance.⁷⁹ No mention of management, as such, was made as a function of industry. Instead, six "major fields" one of which was "managerial," were listed, into which agricultural supply--sales and service occupations could be grouped.⁸⁰

However, in an earlier study, Clark and Meaders had referred to the function approach, and their summary stated:

⁷⁹Raymond M. Clark and others, Career Opportunities, Unit 1 (East Lansing: Michigan State University, 1969), p. 5.

⁸⁰Ibid., p. 14.

. . . the function approach, with the lists of competencies and knowledge, skill, and ability needed will better enable a teacher to take each student "where he is and carry him as far as possible up the ladder. . . ." Each individual will be better able to fit into the world of work . . .⁸¹

In their suggested "Next Steps" Clark and Meaders indicated:

. . . the function approach to identifying information essential to curriculum development for educational programs serving non-farm agricultural businesses and industry is sound and workable. . . . Further study of related agricultural business or industry is needed to determine the functions that are performed and the activities needed to perform the functions. This will enable teachers and instructional material specialists to select content appropriate for the prospective employees in the business without confining the training to the content of any one of the traditional vocational areas. . . .⁸²

Cooperation between other subject matter teachers with agricultural teachers were suggested early in the report. In their introduction, Clark and Meaders indicated a need for more than one of the traditional areas of vocational education fields as well as "general education" in training programs suited to training for employment in modern agribusiness and industry.⁸³

The general approach in the work of Meacham and McCormick is one in which the validity of job requirements for any job would be "built up" on the basis of data on the attribute requirements of the individual job elements (or groups of elements) that are part of the

⁸¹Raymond M. Clark and O. Donald Meaders, Function Approach to Identifying Curricular Content Appropriate to Vocational-Technical Education Programs (East Lansing: College of Education, Michigan State University, March, 1968), p. 19.

⁸²Ibid., pp. 20-21.

⁸³Ibid., p. 1.

job.⁸⁴ Thus, the concept of a function approach was evident, although the terminology was different from that used by Clark and Meaders.

In 1966, in James Joseph Albracht's study, forty competencies important to the performance of nine essential activities by sales personnel in the feed industry were rated by a jury of experts. The jury was composed of educator and industry sub-juries. Very little disagreement between the sub-juries was found, with only fourteen out of a possible 360 responses significantly different in the opinions of the sub-jury members. All those competencies rated as important by 50 percent or more of the jury members were considered to be "essential," while those competencies which were not rated as important by 50 percent or more of the jury members were considered not essential to the performance of the designated activities. A yes or no response was used as to whether or not an item was considered to be important.⁸⁵

William E. Gleason had in 1967 established the "function of management" as one of four functions required in the operation of Michigan farm implement retail businesses. Competencies and activities within this management function were identified by persons in managerial positions as "essential" to the performance of the management

⁸⁴Robert C. Mecham and Ernest J. McCormick, The Rated Attribute Requirements of Job Elements in the Position Analysis Questionnaire (Lafayette: Indiana Occupational Research Center, Purdue University, January, 1969), pp. 1-28. (VT 007 997)

⁸⁵James Joseph Albracht, "A Process for Determining Vocational Competencies for the Performance of Essential Activities by Sales Personnel in the Feed Industry, and Loci at Which the Competencies Could be Taught" (Unpublished Ph.D. dissertation, Michigan State University, 1966), pp. 1-137.

function.⁸⁶ Thus, a precedent was established for identifying all levels of need for or importance of various competencies, with those of highest level being called "essential" by at least two researchers in former works on agribusiness management.

Yagi and others⁸⁷ established a model usable to develop a taxonomy of vocational-industrial education objectives which would provide a framework or structure for evaluating and comparing existing programs and be useful in eventually establishing criteria for the design and development of a radically different comprehensive curriculum. It is visualized in Figure 1.

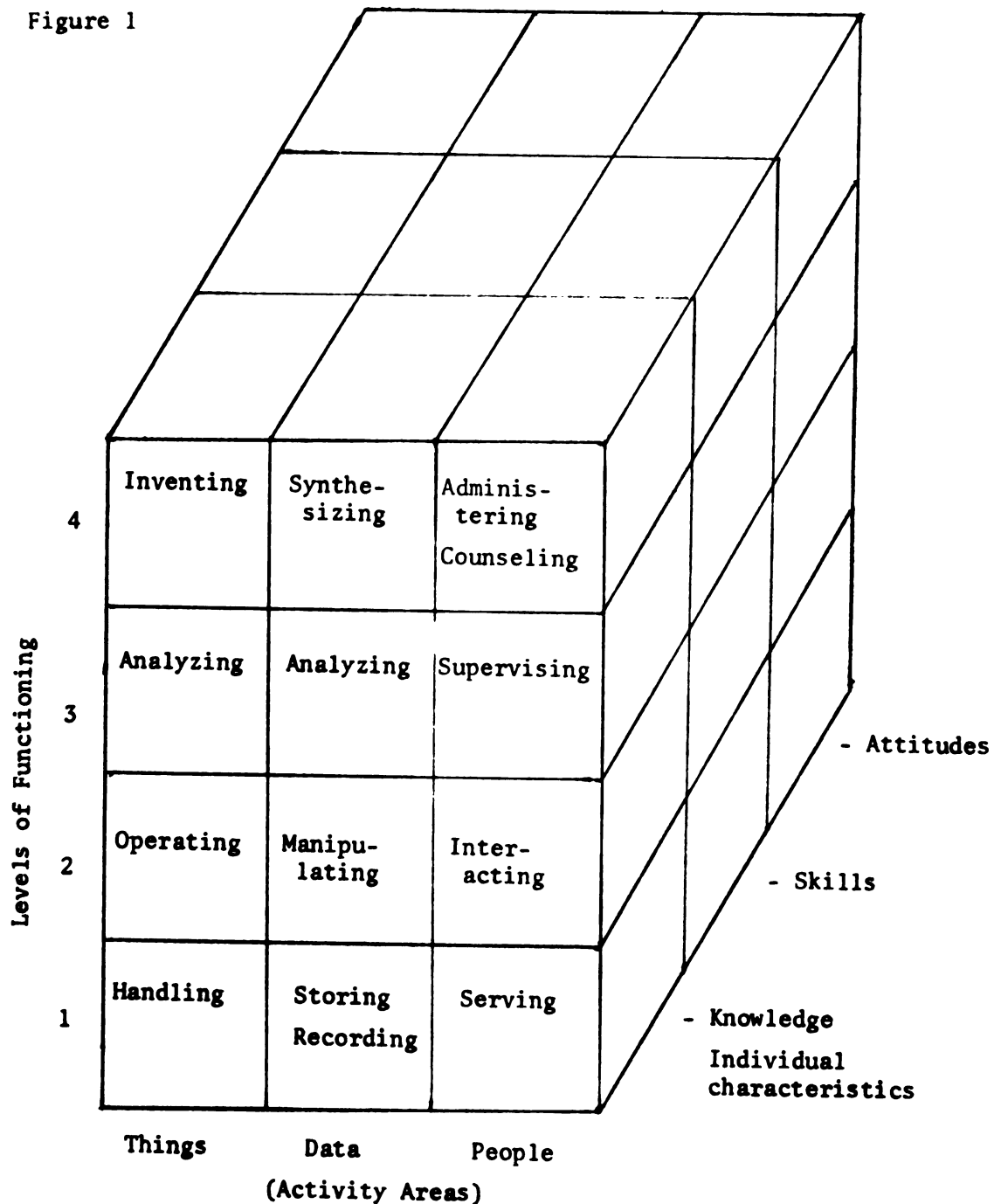
Effective use of the taxonomy requires first, that objectives be thought of in terms of functions, not content, and that they be expressed in terms of behaviors in dealing with the environment. An appropriately stated objective implies the three dimensions of the taxonomy, and is classifiable in one, and only one, taxonomic category. Recent literature on the preparation of objectives, Mager (4) Mermon and Melching (5), and Bloom (6) has drawn attention to the need to present them in the proper terms. We feel that the taxonomy can be an aid in this task by providing the necessary framework.

Secondly, the most effective use of the taxonomy depends on an efficient weighting system. The taxonomy provides a practical way of displaying the spread of objectives; but, other than the number of objectives within a taxonomic category, we find no efficient means of indicating depth, weight, or relative importance. Perhaps it isn't necessary for a classification system to become involved in depth. However, without this dimension the system's usefulness is limited in that it doesn't give enough information. For example, the taxonomy might show that a certain objective is covered in a

⁸⁶ William E. Gleason, "Functions of Industry Approach to Curriculum for Vocational Education" (unpublished Ph.D. dissertation, Michigan State University, 1967), p. 55.

⁸⁷ Kan Yagi and others, The Design and Evaluation of Vocational Technical Education Curricula Through Functional Job Analysis, Final Report (Washington: George Washington University, August, 1968), p. 2. (ED 023 913)

Figure 1



Three Dimensional Representation of Taxonomy.

Source: Kan Yagi and others, The Design and Evaluation of Vocational Technical Education Curricula Through Functional Job Analysis, Final Report (Washington: George Washington University, August, 1968), p. 2. (ED 023 913)

course. It would not show that 40 percent of a student's time would be consumed in achieving this objective due to its importance. The advantage of this taxonomy, then, is that it provides specific dimensions and categories on which to determine a weighting system.

Finally, without measures or other indications of achievement of the objectives, the classification of objectives, or even the specification of them, is meaningless. By the same token, adequate measurement is difficult, if not impossible, without some way of identifying and defining the behavioral phenomena to be measured. The taxonomy can be a tremendous aid to the delineation and identification of behaviors to be measured.⁸⁸

Although somewhat limiting, when applied to managerial level positions, this model seems to have very desirable adaptability to the tasks of identifying needs at different levels, in designing educational programs.

Several people have at least made reference to (if they didn't elaborate on) the concept of combining individuals from more than one occupation in the same training program. Byram suggested using a family of closely related agricultural occupations rather than a specific occupation as a basis for training program development.⁸⁹ Brandon and Evans suggested a broad field approach to vocational preparation.⁹⁰ Face, Flug, and Swanson, in their study of American industry indicated orientation of training towards a broad

⁸⁸ Ibid., p. 18.

⁸⁹ Harold M. Byram, Guidance in Agricultural Education (Danville, Ill.: The Interstate Printers and Publishers, 1959), pp. 14-15.

⁹⁰ George Brandon and Rupert Evans, "Research in Vocational Education," Vocational Education, Sixty-fourth Yearbook of the National Society for the Study of Education (Chicago: University of Chicago Press, 1965), p. 278.

focus on an essential concept or function appears to be superior to a narrow skill oriented approach for specific industries.⁹¹ Clark and Householder reported that the analysis of an industry by functions and activities needed in performing functions serve as a satisfactory basis for organizing training programs.⁹²

In each of the foregone references, educators were the primary investigators or authors and almost all of them were concentrating on proposals for training at preservice, or in some cases low level workers' in-service training programs. A few dealt with some aspects of managerial success measures for a restricted type of manager group, such as farm managers.

CONCEPT AND/OR COMPETENCY AREAS REQUIRED FOR SUCCESSFUL MANAGEMENT

As discussed by several authors in the preceding section, "the management function" is made up of many interacting concepts. Although there are certain concepts which involve more than one specific sensitivity in relationship to people, things or other ideas or concepts, many can be placed within certain broad categories.

In an article on communications, Borosage identified the following "elements" or "sensitivity areas" within communications

⁹¹ Wesley L. Face, Eugene R. F. Flug, and Robert S. Swanson, "A Conceptional Approach to the Study of American Industry," The American Vocational Journal [AVA; Washington, D.C.], XL, No. 3 (March, 1965), 15-17.

⁹² Raymond Clark and William Householder, "Important Areas of Non-Farm Agricultural Occupations," The Agricultural Education Magazine [Danville, Ill.], XXXVII, No. 6 (January, 1965), 169-70.

involved in administration or management of an organization: goals and objectives, means or planning, role definition, atmosphere or climate, participation, individual differences or heterogeneity, social control, human relations, size, change, standards, and evaluation.⁹³

Numerous authors have incorporated many thoughts on various areas which have been included in the above framework. Meaders and Ferguson identified those considered by Expert Managers and Professional Management Educators as required for their success relative to small, rural agribusiness management. They may be found in the companion report by O. D. Meaders and Gordon E. Ferguson derived from the study this dissertation is based upon. Those required areas also appear as Appendix E.

SUMMARY

Much work and a great deal of writing has been done on the subject of organizations, and especially large businesses. However, relatively little, in proportion to that found on large industrial types of organizations, has been identified which pertains directly to small, rural agribusinesses. Rather sketchy inferences to the effect that basic differences exist between small and large businesses as to the behavior of managerial personnel, and a few studies that skirt around the central theme of this study were located in the writings of others. Many studies have been conducted in preparation for making suggestions for preservice and in-service training for potential entry

⁹³Lawrence Borosage, "A Basis for Viewing Communication," The National Elementary Principal, XLI, No. 7 (May, 1962), 6-12.

level workers and employees of agribusinesses at or near entry levels. Practically no studies, other than for general farm management have been aimed at general management principles applicable to all types of small, rural agribusinesses.

Rural communities contain most of the nations' businesses, and control a majority of the nations' natural resources. Many small businesses fail annually. Over 90 percent of those failures are due to poor management.

While numbers of people, and percentages of the total population employed in production agriculture will decrease during the next decade, both numbers and percentages of the population will be increasing in service-producing industries. Changes in educational offerings will be required to cope with changing manpower needs. Educators from several disciplines will need to pool their experience, and work with one another to help to identify, and provide needed educational programs for all levels of responsibility--not the least of which is managerial, and proprietorial--for all types of businesses, wherever they exist. Although the major burden of responsibility for developing and altering educational programs may rest on the shoulders of educators, they alone cannot, and should not be left with the total responsibility. Contributions must be made by laymen, having special insights (not shared by outsiders), into problems and their solutions within their own areas of specialty. There is ample evidence that policies have been established, at both national and state levels, that provide the basis for local education planning to be done jointly by educators and laymen.

Programs must, if they are to meet the mandatory standards for federal and state financial support, provide suitable training for all people at all ages, in whatever areas of occupational or career education individual needs, interests, and abilities lead them. To accomplish these sweeping national educational goals, no segment of our society can be ignored. This is especially true in Michigan, where virtually nothing has been done in the agribusiness management area.

Research has shown that adult education especially in agricultural (farm) management is a profitable use of resources. Other research has shown that certain types of adult education, such as skill development in landscape gardening, no matter how long the person is employed, ever repays the cost of education. Also, there is evidence that employability is not assured through providing people with saleable skills. Job opportunities must be available. Rural development, and the retention or expansion of employment opportunities in rural areas rests with the retention and expansion of rural agribusinesses. This in turn, can only be accomplished through the efforts of highly competent small, rural agribusiness managers, who have the required knowledge, skills, and attitudes plus access to ancillary services, such as computerized business analysis, and assistance in interpretations of such aids.

Educational programs, and ancillary services must be provided to up-date, and up-grade presently functional small, rural agribusiness managers, and to provide suitably prepared replacements, and additions to the existing managerial personnel through preservice training.

Past work by various researchers has evolved an approach to identifying educational program needs, through what is coming to be known as "the Functions of Industry approach." Management has been isolated as one function within the organization of businesses. Competencies and activities within the management function have been identified for one specific type of agribusiness in Michigan. However, those involved in this task were city based employees of large industrial manufacturing businesses, rather than small, rural agribusiness managers. Restriction to farm implement retail businesses left this study with too limited a potential clientele to be readily usable for developing widespread educational programs. Furthermore, items identified were couched in terms which if not unique to one industry were at best, very restricted in nature.

A model was, however, developed by another group of researchers, which lends itself to the task of identifying the levels of various educational objectives, which can be applied to education on specific topics or concepts within the management function. Although designed for use in a more general application, slight adaptation may make it very useful for this specific situation. Perhaps more correctly stated, the use of identified levels of importance of future education about specific items as proposed in this study may add the dimension of depth to the model Yagi and others created, but recognized to be lacking a weighting system.

Several authors have referred to the mixing of individuals from closely related occupations in a cluster pattern, based upon

mutual educational needs. Rather than training programs aimed at one specific job, a cluster of competencies, usable in several different occupations is gaining favor as a basis for developing practical educational offerings.

The breaking down of an industry into various functions performed has been a practice in business organization, and is being used also as a basis for educational programs aimed at the preparation of individuals for performing those functions. The management function, as separated out from other functions within an organization, has been broken down into parts. These parts have been referred to as "sensitivity areas" within communications. More inclusive than "sensitivity areas," the term "component areas" has been used to include concepts and/or competencies required for successful management. They have been isolated from studies and writings primarily concerned with big business, or large organizations. Areas include: Goals and Objectives, Planning, Role Definition, Atmosphere, Participation, Individual Differences, Social Control, Communications, Human Relations, Size, Change, Standards, and Evaluation. Within each component area several concept and/or competency items have been identified as required for success relative to small, rural agribusiness management. They are located in Appendix E.

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CHAPTER III

DESIGN OF THE STUDY

The design and methodology used to determine the degree of importance of required concept and/or competency areas, and future training about those areas, as perceived by five groups of people for performing their respective roles relative to small, rural agribusiness management are discussed in this chapter. The chapter consists of the following parts: Population and Sample Selection, Designing the Information Collection Instrument, Procedure for Information Collection, Information Treatment and Analysis, and a Summary.

POPULATION AND SAMPLE SELECTION

Identifying the Population

In order to limit and identify the population for this study, a definition of "small, rural, agribusiness" was required. To begin to define this group of businesses a definition of "small business" was located in a Small Business Administration publication entitled SBA Business Loans for Small Firms.

For business loan purposes, SBA defines a small business as one that is independently owned and operated and nondominant in its field and that meets more detailed standards developed by the agency. These generally are as follows:

A manufacturing concern is considered small if its average employment in the preceding four calendar quarters was 250 or fewer persons, including employees of affiliates, and is considered large if its average employment in this period was more than 1,000 persons. If its average employment was more than 250 but not more than 1,000 persons, it may be considered either small or large, depending on the employment size standard SBA has developed for its particular industry.

A wholesale concern is classified as small if its yearly sales are \$5 million or less.

Most retail businesses and service trades are considered small if their annual receipts do not exceed \$1 million.

Because these standards are of a general nature, the small business owner should consult the nearest SBA field office . . . to learn if a specific standard has been established for his type of business.

The form of organization of a business--that is, whether it is a proprietorship, partnership, corporation, or other form of business enterprise--has no bearing on the question of whether it qualifies as a small business.

Furthermore, the fact that a business is a subsidiary or affiliate of another concern or group of concerns or is itself a parent corporation having subsidiaries does not necessarily disqualify it from consideration for an SBA loan--the test is whether the entire group of businesses, considered as a unit, meets the small business standards.¹

To restrict the population to rural settings, the U.S. Census definition of "rural" has been used:

According to the definition adopted for use in the 1960 Census, the urban population comprises all persons living in (a) places of 2,500 inhabitants or more incorporated as cities, boroughs, villages, and towns . . .; (b) the densely settled urban fringe, whether incorporated or unincorporated of urbanized areas . . . (d) counties in States other than the New England States, New Jersey, and Pennsylvania that have no incorporated municipalities within their boundaries and have a density of 1,500 persons or more per square mile; and (e) unincorporated places of 2,500 inhabitants or more . . .

In all definitions, the population not classified as urban constitutes the rural population.²

¹U.S., Small Business Administration, SBA Business Loans for Small Firms (Washington, D.C.: Government Printing Office, 1962), p. 6.

²U.S., Bureau of the Census, U.S. Census of Population: 1960 Number of Inhabitants, Michigan, Final Report PC(1) 24A (Washington, D.C.: Government Printing Office, 1961), p. 24-2.

At the National Committee for the Development of Vocational Agribusiness and Natural Resource Occupations meeting in Washington, D.C., April 1 and 2, 1971, the following definition of agribusiness was developed:

A combination of the producing operations of a farm, and, in varying degrees, the service associated with them; the manufacturing and distribution of farm equipment, fertilizers and supplies; the processing, storage, marketing and distribution of farm commodities including food and fiber; and the conservation, preservation, and use of renewable natural resources.³

Geographic and occupational considerations. The population studied consisted of five groups of individuals: Expert Managers, Other Managers, Professional Management Educators, Agricultural Teachers, and Other Professional Workers. All were directly involved in management of, or teaching management concepts to managers of small, rural agribusinesses. The vast majority of the population resided and/or worked in either Allegan or Branch county. One group--Professional Management Educators--worked primarily on the Michigan State University campus in East Lansing.

Small geographic areas, relatively close together, yet containing adequate numbers of a wide variety of types of farmers and correspondingly varied types of non-farm, small, rural agribusinesses were deemed necessary to achieve the purpose and objectives of the study. The two rural areas selected had several small villages but no large metropolitan centers within them. Michigan State University,

³"Agricultural Education, the Department of Practical Arts and Vocational-Technical Education," Missouri Agricultural Education Bulletin [Columbia: University of Missouri], XXIV, No. 4 (1971), 77.

situated in the Lansing metropolitan area, was utilized as a source of Professional Management Educators due to the lack of adequate numbers of such individuals in the two rural counties selected.

By comparing agricultural county data, a group of eight potential counties were chosen for close scrutiny. The numbers of farms of various types in each county were identified. In addition more details related to sale of crops, animals and animal products, as well as educational levels achieved by farmers were secured.⁴

From comparisons of that information, it was decided that Allegan and Branch counties would be used. They included what were considered adequate numbers of desired types of individual businesses. Table 2 provides comparative information on the two counties. Branch County, being in the general livestock and corn type of farming area, provided diversified agricultural production units. Suitable numbers of specialty dairy, field crops, general, cattle, hog, and sheep farms, with acceptable numbers of farms producing forest products were included.

Allegan County also had adequate numbers of above-mentioned types of farms, with the exception of sheep and lamb production units. Allegan County had a large number of poultry, fruit tree and/or grape producing units as well as vegetable producers. Although

⁴U.S., Bureau of the Census, Census of Agriculture, 1964: Statistics for the State and Counties, Michigan, Vol. I (Washington: Government Printing Office, 1967); W. T. Wright, Agricultural Trends in Michigan by Crop Reporting Districts and Types of Farming Areas, 1949-1964, Agricultural Economics Department Report 81 (East Lansing: Michigan State University, 1967); and W. T. Wright and D. A. Caul, Michigan's Agriculture: Its Income, Major Products Location and Changes, 1959-64, Extension Bulletin 582 (East Lansing: Michigan State University, 1967).

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Table 2. Selected Agriculture Data for Allegan and Branch Counties and Michigan, 1964

Information Items	Allegan County	Branch County	State
Number			
Total farms	2,666	1,734	93,504
Commercial farms	1,724	1,117	60,187
Field crop farms	168	329	--
General farms	125	114	--
Specialty dairy farms	592	381	--
Specialty cattle, hog, and sheep farms	268	238	--
Farms selling cattle	1,144	727	--
Farms selling hogs and pigs	603	587	--
Farms selling sheep and lambs	63	166	--
Specialty poultry farms	261	25	--
Farms reporting tree fruit, grape and nut sales	322	46	--
Specialty fruit farms	204	--	--
Nursery and greenhouses	51	16	--
Farms reporting vegetable sales	211	17	--
Farms reporting \$500 or more in recreation income	9	5	--
Farms reporting forestry production sales	188	184	--
Percent			
Farmers completing 8 years or less schooling	54	35	46
Farmers completing 1 to 4 years of high school	38	55	46
Farmers at college one or more years	8	10	8

Sources: U.S., Bureau of the Census, Census of Agriculture, 1964: Statistics for the State and Counties, Michigan, Vol. I (Washington: Government Printing Office, 1967); W. T. Wright, Agricultural Trends in Michigan by Crop Reporting Districts and Types of Farming Areas, 1949-1964, Agricultural Economics Department Report 81 (East Lansing: Michigan State University, 1967); and W. T. Wright and D. A. Caul, Michigan's Agriculture: Its Income, Major Products Location and Changes, 1959-64, Extension Bulletin 582 (East Lansing: Michigan State University, 1967).

neither of the two selected counties had large numbers of recreation farms, some recreational agribusinesses were located in both counties. Thus nearly all types of farms common throughout Michigan were located in these two counties.

Education levels. Another factor considered in population selection was the amount of formal education individuals could be expected to have received. The rural, small agribusiness manager portion of the population was selected partly because of their similarity in educational levels to state averages for similar individuals. Non-managerial participants were, except for the Other Professional Agricultural Workers, selected according to criteria requiring at least a baccalaureate degree.

As shown in Table 2, the farmers completing eight or less years of schooling in Allegan County made up a higher percent (54) and Branch County a lower percent (35) than the state as a whole (46). Farmers completing from one to four years of high school made up a lower percent (38) in Allegan, and a higher percent (55) in Branch County than the state as a whole (46). Farmers who attended college one or more years were the same percent (8) in Allegan County and the state as a whole. Of those who attended one or more years of college, Branch County had a larger percent (10) than the state (8). Thus within the two counties, the levels of education of farmers appeared to be very close to state averages.

Managers. In order to limit the types of individuals from the small, rural agribusinesses to managerial personnel, a definition was required.

Mondart and others defined "manager" as:

MANAGER, Job Description

This job title is indicative of employees who direct and supervise personnel in attaining operational goals of an organization or department as established by management. Many other titles, such as department head, chief, leader, boss, superintendent, owner-manager, and some cases presidents, are synonymous with managers. A variety of manager titles exist, but primarily the job, whether it is a sales manager or shop manager, is practically the same. Classifications are made according to type of work performed and/or the department managed.⁵

An attempt was made to involve managers in this study who employed at least 40 percent of their business resources in specific types of agribusinesses. The following categories were used:

A. Managers of production units

1. General production agribusinesses (farms where three or more enterprises were included, with none utilizing more than 40 percent of the business resources)
2. Dairy farms
3. Field crop farms
4. Forestry management
5. Meat animal farms
6. Nurseries and/or greenhouses
7. Orchard, fruit and/or nut farms
8. Poultry farms
9. Recreation agribusiness
10. Truck (vegetable) crop farms

⁵D. L. Mondart, Jr. and others, Selected Job Title Description for Non-Farm Agricultural Jobs in Louisiana (Baton Rouge: Louisiana State University, 1967), p. 11. (ED 019 483)

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B. Managers of supportive agribusinesses

1. General supportive units (where two or more of the following were included)
2. Crop marketing
3. Crop production materials and/or service suppliers
4. Livestock marketing
5. Livestock production materials and/or services suppliers

Management educators. In addition to managers, the study included management educators (who devoted 25 percent or more of their time to education activities for agribusiness managers). These included professional management educators (who were at least part-time extension workers specialized in training people for management of one or more types of agribusinesses identified above), agricultural teachers (including county extension service employees and vocational agriculture teachers); as well as a group called other professional agricultural workers who required agricultural competencies for their jobs and either formally or informally educated agribusiness managers for management.⁶

Jury of Experts and Sample Selection

Identifying the people to be studied within the selected geographic areas called for procedures which would clearly delimit the types of individuals. No accurate complete lists of such persons existed from which to draw a sample. Familiarity with the areas to be

⁶See pages 7-11 for more complete definitions of these groups.

studied was needed to identify managers and other personnel. Time and financial limits prohibited a total population investigation, even within the restricted geographic areas, to identify all specific individuals who met the criteria for inclusion in the population to be studied. Therefore a procedure was used in Allegan and Branch counties which relied upon the accumulated or conglomerate knowledge of key community agricultural leaders. Although the exact numbers of various types of specific individuals was never determined, a wide variety of types of individuals was selected to serve on the jury of experts or in the sample. The following procedures were used:

- A. Three Vocational Agriculture teachers and the County Extension Service Director employed in each county were identified. They were contacted first by phone, and later by a letter of introduction.⁷ Each one was asked to identify two other leaders considered to be knowledgeable about large numbers of residents of the county in which they worked, and who might be capable of and willing to identify the most successful or "expert" representatives of each group of managers, such as dairy farmers and crop marketing business managers.
- B. The resulting group of twelve people, including the originally contacted four, plus the two each of them named, were asked to assist in identification of potential participants in the study.

⁷An example of the letter is reproduced in Appendix A.

- C. Instructions⁸ and forms were provided to each of the county leaders, upon which they were asked to provide the desired names, as well as addresses and phone numbers of each person named. They were asked to identify up to three managers from each of the fifteen types of agribusinesses listed on pages 70 and 71. Those named were to be perceived by the person identifying others as the most successful or "expert" managers in their respective types of businesses. Ten of the twelve asked in each county responded to the request by providing the lists of managers. Two people in each county did not provide such lists.
- D. Each of the ten individuals who provided lists was given a packet of stamped, addressed envelopes, and letters of invitation to attend any one of a series of meetings to be held in mid-February 1971. Each letter was to be co-signed by the local person who named the "experts" along with the project leaders, and then mailed to selected individuals.⁹
- E. Those who attended one of these series of meetings were given instructions and requested to complete a preliminary draft of an instrument as a part of the process of developing the final draft to be used later. Each person was asked to respond to

⁸See Appendix B for these instructions.

⁹See Appendix C for a sample letter.

all items. In addition, they were asked to make suggestions for additional items, alterations and/or deletions considered beneficial to the design of the instrument.

- F. Following the first series of group interview meetings, thirty-one individuals who met the criteria established for qualification as "expert managers" of small, rural agribusinesses were identified. To qualify as an "expert" on agricultural, and business managerial competency areas needed by agribusiness managers, the following criteria were met:
1. Employed in managerial capacity by a small, rural agribusiness at the time of selection.
 2. Responsibilities included performance of managerial duties at or above the medium managerial level, if in a multi-level organization.
 3. A minimum of ten years of experience gained as an employee (or self employed) in agribusiness, at least five of which include major managerial responsibilities, and the last two or more years were within the organization where presently employed.
 4. Be identified by three or more out of ten agribusiness management educators, financiers, other business managers, and/or peers who work in the county surveyed, when asked to identify two or three managers in the county whom they considered to be "the most successful managers"

within each type of agribusiness, based upon the individuals' standards for success.

5. Each manager identified by the preceding four criteria should have at least rated himself as "successful" in both "personal" and "business management achievement." This self-evaluation should have been based upon whatever standards and measures of success each individual deemed important and relevant to his own situation. The alternative responses for this self-evaluation were: "very successful," "successful," "unsuccessful," and "very unsuccessful."

Table 3 shows a breakdown of the numbers of managers on the jury of experts involved in each category of agribusinesses. With the exception of recreation, all types of agribusinesses were represented by at least one Expert Manager. For more details about the Expert Managers as well as Professional Management Educators who served on the jury of experts refer to the companion report by Meaders and Ferguson, which was prepared simultaneously with this dissertation from the same study.

To qualify as an "expert" Professional Management Educator, the following criteria were met:

- A. Employed part-time (at least 25%) at the time of selection, and for the immediately preceding three years or longer, as an agribusiness management teacher of adult students.

Table 3. Numbers of Managers on the Jury of Experts Involved with Each Production and Supportive Type of Agribusiness.

Production agribusinesses	No.	Supportive agribusinesses	No.
General production (3 or more enterprises)	4	General supportive (2 or more of those below)	5
Dairy farms	7	Crop marketing	3
Cash field crop farms	9	Crop production materials and/or service supplier	2
Forestry management	1	Livestock marketing	1
Meat animal farms	4	Livestock production materials and/or service supplier	1
Nursery and/or greenhouses	2		
Orchard, fruit and/or nut farms	2		
Poultry farms	3		
Recreation agribusiness	0		
Truck (vegetable) farm	1		

(18 years old or older) who are employed in jobs which require major duties in the areas of agribusiness management. Be partially employed as an educator of agribusiness teachers--who conduct preservice or in-service training for those individuals who are present or prospective agribusiness management advisers or instructors.

- B. Have had a minimum of a Bachelor's degree at an institution of higher learning, including at least a minor in no less than two of the three areas, agriculture, education, and business management.
- C. Have had at least three years of first-hand experience as an employee or self-employed, other than in an educational capacity, in at least one agribusiness.
- D. Be identified by one of his superiors within the organization by which he is employed, as an expert in the field of agribusiness management instruction.
- E. Given four choices for a forced response including "very successful," "successful," "unsuccessful," and "very unsuccessful," each Professional Management Educator should at least rate his own instruction as "successful" when asked: "Using your own standards and measures of success, how successful are you in your agribusiness management instruction efforts?"

The group of twelve professional management educators selected to serve on the jury of experts met all of the criteria. They were

identified by the Michigan State University Extension Service Personnel Director as being, in his opinion, experts in their respective fields. They were all joint appointees having direct managerial advisory contacts with practicing small, rural agribusiness managers, and also teaching management to present or prospective agriculture teachers and/or county extension personnel.

Table 4 shows a breakdown by numbers who worked with different types of agribusinesses. All production agribusiness types of managers were dealt with by at least one professional management educator. A soil specialist and a crop marketing specialist both indicated that some work was done by them with nursery and/or greenhouse managers, although they considered their major role as being consultants to general production agribusiness managers. As in the case with general production, several individuals worked with more than one type of supportive agribusiness. Thus, although Table 4 doesn't indicate any dealing with crop or livestock production materials and/or service suppliers, or livestock marketing agribusiness managers, there was in fact at least one or more who dealt with each type of supportive agribusiness. More details are available in the companion report by Meaders and Ferguson.

Sample selection. As stated earlier, creation of an accurate list of the population was not practical within the time and financial limitations for the project reported upon. The selection of sample

Table 4. Numbers of Professional Management Educators on the Jury of Experts Involved with Each Production and Supportive Type of Agribusiness.

Production agribusiness	No.	Supportive agribusiness	No.
General production (3 or more enterprises)	4	General supportive (2 or more of those below)	7
Dairy farm	1	Crop marketing	1
Cash field crop farm	1	Crop production materials and/or service supplier	0
Forestry management	1	Livestock marketing	0
Meat animal farm	1	Livestock production materials and/or service supplier	0
Nursery and/or greenhouse	0		
Orchard, fruit and/or nut farm	1		
Poultry farm	2		
Recreation agribusiness	1		
Truck (vegetable) farm	1		

respondents was achieved by the procedure described earlier for selection of the jury of experts. In fact, a large portion of the group who eventually participated in the study were identified prior to the first series of group interview meetings, in the process of selecting the jury of experts.

Ten agricultural leaders from Allegan and ten from Branch counties had each submitted lists of potential experts. A total of 205 names were submitted from Allegan County. A total of 170 were submitted from Branch County. The Michigan State University Extension Service Personnel Director submitted 27 names from the campus. Thus a total of 402 names were identified prior to the first series of meetings.

Those people already named were all potential experts, at least by one person's standards. Therefore, a means had to be developed to get people identified who were perceived to be below average, or unsuccessful managers, as well as those filling in the center of a continuum between the expert and unsuccessful extremes within the total population. In an effort to secure these extra potential respondents, the following procedure was followed:

- A. A letter was mailed to each of the original ten people in each of the two counties involved. All individuals were asked to identify additional people, including some who were considered to be below average or poor managers.¹⁰

¹⁰See Appendix D.

- B. To avoid having any person being identified as a failure, and to fill out some areas where expert managers had not been identified earlier, the second list of names was to include some newly identified potential experts as well as those below average.
- C. Each of the people newly named, plus those originally identified, but who had not participated in the first series of group interview meetings were to be asked to attend any one of a second series of meetings. Such a procedure was intended to secure respondents of all degrees of managerial success, and from all types of small, rural agribusinesses found in the two counties.
- D. All letters of invitation to the second series of group interview meetings were mailed by the host agriculture teacher, instead of the person who provided the second list of names. This was thought to have greater drawing power than the method used to invite people to the first series of meetings, whereby the person who identified each individual sent the invitation to participate.
- E. Following the completion of the second series of meetings, a determination was made of which specific types of managers had not yet been included in the sample by voluntary attendance at an interview. Personal contacts

were then to be made to no less than two individuals from each category whose names appeared on the lists of potential respondents. By contacting two individuals from each category it was hoped that at least one would cooperate in the study, to assure no category would be unrepresented in the sample.

- F. The Professional Management Educators included in the sample came from two sources, both of which were identified by the Michigan State University Extension Service Personnel Director. From his original list of potential experts, those who did not respond at the time the jury of experts was created, or who failed to meet all criteria to qualify as experts were asked to fill out a final draft of the information collection instrument--thus becoming potential sample respondents. Of the original list of 27, twelve had served on the jury of experts. Of the remaining 15, seven did not complete the final form. Eight did complete the form, and were included as part of the sample reported on.

In addition to the campus-based individuals, the Extension Service Personnel Director identified five District Extension Specialists who served Allegan County, plus one District Extension Specialist and three Extension Agents who served Branch County (in addition to other duties) as specialists without District Specialist designations. Each of these

people were considered Professional Management Educators. However, most of them headquartered outside of the counties being surveyed, and only three from Allegan County and one from Branch County became part of the sample by completing the instrument. These four plus the eight campus-based respondents constituted the Professional Management Educators portion of the total sample.

- G. Agriculture teachers working in Allegan County included four vocational agriculture teachers, one county extension director, and one county extension agent plus one fruit growers association fieldman, whose major function was grower education. Branch County was served by three vocational agriculture teachers, one county extension director and one county agent. All were encouraged to participate as respondents. Three of the vocational agriculture teachers and the county agent in Allegan County, plus all three of the vocational agriculture teachers and both county extension workers from Branch County responded, thus becoming part of the sample reported upon. The fruit growers fieldman did not attend any of the group interview meetings, and was not contacted personally. The one vocational agriculture teacher and the extension director who did not complete the form gave anticipated early retirement due to ill health as reasons they did not have any interest in future training and chose not to participate.

H. Other Professional Workers included three large, rural agribusiness managers, who attended the interview meetings and completed forms, but due to the size of the businesses operated were disqualified as small, rural agribusiness managers. They all expressed a high degree of interest in participating in any future management training if it became available, and were therefore considered to be suitable respondents. In addition to the three managers of large agribusinesses, others in this category included five government agency or farm organization employees in Allegan County--one each from the Production Credit Association, Farmer's Home Administration, Agriculture Stabilization and Conservation Service, Soil Conservation Service, and Michigan Employment Security Commission.

From Branch County, the Production Credit Association manager, and an employee of the Soil Conservation Service completed the survey instrument--thus becoming part of the sample reported upon.

Jury of expert and sample selection evaluation. Considering what actually happened relative to the intended results, the procedure for selecting members of the jury of experts was very successful. The procedure designed for the selection of the sample to be included in the study was not as successful as was the jury of expert selection technique. However, both processes had strengths and weaknesses.

For a stranger attempting to quickly identify those individuals perceived to be experts in any given category of business management is a difficult task. Local residents--especially leaders in the occupation, such as were used--have definite criteria upon which to make evaluations of the relative successfulness of other residents.

Although most people may place different emphasis upon specific criteria--either stated or unstated--they do evaluate other individuals. If several people, using different criteria or placing differing values on similar criteria, identify the same individual as an expert it is evidence that, by predominant standards or criteria existing in a given area, that person is perceived to have expertise above the norm for the area. Since every individual has (at least to some extent) unique standards by which success is measured, comparison with an unstated norm for the immediate environment may be as accurate as any means of evaluating success. In other words, there are many interacting factors such as health, stage in one's life cycle, and personal values, which influence what is considered success. Some individuals may place high priority on financial gain, while others may rate human relations or some other factor high in a hierarchy of priorities. When others rate an individual as successful, and the individual concurs, who can legitimately question that evaluation and prove it incorrect? The involvement of individuals who do not meet formerly established criteria in the process used to select jury of expert members in which they participate in their own selection is a weakness. If those not qualifying

as experts who participated in the jury selection process served no other purpose in the study, it would be unfair to have them involved. This was not the case, however, since the group not identified as experts served as a trial group on which the instrument being designed was field tested. The final draft of the instrument would have been more appropriately field tested but the comments, questions and reactions of the group at the first series of meetings proved extremely helpful in identifying and correcting faults in the instrument which were not mentioned by those ultimately selected as jury of expert members.

One problem which arose in connection with the use of local leaders in getting others identified and invited to attend one of a series of meetings was not an error in procedure, but one of timing. Blizzards, freezing rain, and two national holidays when post offices were closed caused delays. The interval between first contact with the people involved in identifying others, and the first series of meetings was too brief under the circumstances. As a result some people were not informed until after the meetings had been held. Timing was crucial to the success of the process involved. Letters that arrived on time brought results.

Depending on how it is perceived, having each local person mail a co-signed letter of invitation to others may be considered good or bad. It resulted in as many as seven letters being sent to some individuals. This practice can be considered wasteful when considering costs, but may very easily have been the added incentive required to get some people to attend the meetings and complete the

instrument. Under the conditions at the time, use of group interviews was very effective in saving time and money. Twenty-three instruments were completed simultaneously at one meeting. To get individual interview appointments, and then conduct twenty-three separate repetitions of the instructions would have been prohibitive due to the time available for securing information. From January 4, when approval was given to start the project, until spring work practically eliminated participation from all types of business managers was a very brief span of time. An earlier start would have allowed adequate time for all aspects of the study prior to and including data gathering.

One problem arose in the sample selection process which was worthy of mention, although it wasn't an insurmountable obstacle. There were some people who were reluctant--or actually declined--when asked to identify below average or poor managers. Since the process of getting more than one individual to identify persons perceived to be below average was used, as in identifying experts, it became necessary to contact substitute leaders who became involved in identifying managers for the second series of meetings. Some individuals said they could not identify below average managers, because they never worked with them, and therefore didn't know them well enough to identify them. Others reacted in an exact opposite manner, however, and said that it was easier for them to identify the poor managers than to say that others were experts. Evidently personal attitudes, and/or the types of services performed by the individuals affected

their perceptions of their own knowledge of managers with whom they worked.

No way existed to determine the influence of the decision to have only the host agriculture teacher invite people to the second round of meetings. However, several individuals expressed the opinion, that the person identifying the individuals sending the invitations would have resulted in larger attendance at the second series of meetings than experienced. Whether the inclement weather, the late dates relative to spring work (which was in full operation by the time the meetings were held in April), or the lack of several invitations from different local people were most detrimental to attendance can only be an item for conjecture. Given ideal conditions, attendance could probably have been greatly increased by any one or all three improvements--holding meetings when people had time to attend, with several invitations emphasizing importance of participation, and/or improved driving conditions due to improved weather--a factor beyond human control.

Description of respondents. To add support to the thesis that there are no significant differences in needs for concept and/or competency areas within the management function or for future training in these areas, as perceived by five groups of managers and management educators, detailed descriptions of respondents was required. The diversity displayed in the descriptions in this section will be referred to throughout the remainder of the dissertation as warranted by its relevance to the various issues being considered.

A. Locations where respondents were employed. Table 5 illustrates the frequency distribution of employment locations for all respondents. Allegan County was the major location where 36 of the 64 respondents were employed. More than two-thirds, or 12 of the 17 Expert Managers, were included, along with 9 of the 15 Other Managers, 5 of the 10 Agriculture Teachers, 3 of the 12 Professional Management Educators, and 7 of the 10 Other Professional Workers.

Table 5. Locations of Respondents

Locations where employed	Numbers of each type of respondent					
	Totals	Expert managers	Other managers	Agricul- ture teachers	Profes- sional manage- ment educators	Other profes- sional workers
	N=64	n=17	n=15	n=10	n=12	n=10
Allegan County	36	12	9	5	3	7
Branch County	20	5	6	5	1	3
Campus of Michigan State University	8	--	--	--	8	--

Branch County was the major place of employment for 20 of the 64 respondents. Included were 5 Expert Managers, 6 Other Managers, 5 Agriculture Teachers, 1 Professional Management Educator and 3 Other Professional Workers.

Eight Professional Management Educators making up the balance of the total of 64 respondents were primarily employed on the campus of Michigan State University.

- B. Numbers of respondents of each type involved with different types of agribusinesses. Table 6 shows the frequency distribution of each type of respondent involved with each of 15 types of small, rural agribusinesses. Seven of the Expert Managers were farming exclusively, as were 7 Other Managers. Six Expert and 4 Other Managers operated exclusively supportive agribusinesses. Four of both Experts and Other Managers operated both production and supportive types of agribusinesses. Thus the 17 Expert Managers were involved with 23 and Other Managers with 24 different businesses, including all types except livestock marketing and forestry management, in the cases of Experts, and recreation and crop marketing for Other Managers.

All 10 Agriculture Teachers indicated that they worked with multiple types of general supportive agribusiness managers, and 9 also worked with multiple types of general production agribusiness managers or farmers. Only one was not working with general farmer types. He was specialized in the swine production and supportive types of business management.

Nine of the Professional Management Educators worked with more than one type of supportive agribusiness managers, while one worked only with livestock marketing managers.

Table 6. Numbers of Respondents* of Each Type Involved with Different Types of Agribusinesses

Types of small, rural agribusinesses involved with management of:	Numbers of each type of respondent				
	Expert managers n=17	Other managers n=15	Agriculture teachers n=10	Professional management educators n=12	Other professional workers n=10
General production (3 or more enterprises)	1	1	9	8	-
Dairy farms	1	1	-	-	-
Cash field crop farms	3	4	-	1	1
Forestry management	-	2	-	-	1
Meat animal farms	2	2	1	1	1
Nursery and/or greenhouse	1	1	-	1	-
Orchard, fruit and/or nut farms	2	2	-	-	-
Poultry farms	1	1	-	1	-
Recreation agribusinesses	1	-	-	-	-
Truck (vegetable) farms	1	2	-	-	-
General supportive (2 or more of those below)	5	4	10	9	9
Crop marketing	1	-	-	-	1
Crop production materials and/or service suppliers	2	1	-	-	-
Livestock marketing	-	2	-	1	-
Livestock production materials and/or service suppliers	2	1	-	-	-

*N = 64. Some individuals were involved with more than one type.

Eight worked with 3 or more types of farmers. Four were more specialized in types of farmers worked with. One each worked with cash field crop farmers, meat animal farmers, nursery and/or greenhouse managers, and poultry farmers.

Nine of the Other Professional Workers were involved with 2 or more supportive types of agribusinesses. One each was involved with crop marketing, cash field crop farming, forestry management and meat animal farming.

- C. Employment status of agribusiness managers. Less diversity was achieved than desired in the employment status of agribusiness managers as illustrated in Table 7. Seven Expert Managers and 7 Other Managers were farm owner-operators. No farm renters participated, even though there were renters included in the population. Two non-farm or supportive business Expert Managers were hired, and 4 were owner-operators. Of the Other Managers of supportive businesses, 2 each were hired and owner-operators.

Four each of the Expert Managers and Other Managers operated both production and supportive agribusinesses. Of the 4 Experts, one was a hired farm manager, but owned a supportive business. Three were owner-operators of farms in addition to managing a supportive business. Three of the 4 owned the supportive business operated and one was a hired manager of the supportive business he managed.

Table 7. Employment Status of Agribusiness Managers*

Employment status	Production agribusiness managers		Combined production and supportive agribusiness managers		Supportive agribusiness managers	
	Experts	Others	Experts	Others	Experts	Others
	n=7	n=7	n=4	n=4	n=6	n=4
1. Hired farm manager	-	-	1	-	-	-
2. Farm renter	-	-	-	-	-	-
3. Farm owner- operator	7	7	3	4	-	-
4. Non-farm hired manager	-	-	1	2	2	2
5. Non-farm renter/ franchise leasee	-	-	-	-	-	-
6. Non-farm owner- operator	-	-	3	2	4	2

* Total agribusiness managers = 32. For each sub-group, the total number (n) is shown for comparison with frequency distributions.

D. Formal education of respondents. The levels, major emphasis, types of degrees or recognition awarded, and elapsed time since receipt of formal education were considered to be potentially influential upon the perceptions of needs of respondents. Table 8 gives a frequency distribution of levels, major emphasis, recognition awarded and time of receipt of formal education, by types of respondents.

Only one Expert Manager received a college degree of any type--a doctorate in Veterinary Medicine. Of the other 16 Expert Managers, only 7 had any formal education beyond high school level, and one of those had not finished high school. Nine had completed 12 or less grades in school.

Only one Other Manager completed an advanced degree, one a bachelor's degree, and 3 attended some post-high school training of less than baccalaureate level. One of those had not completed high school, however. There were 10 who had completed 12 or less grades without any post-high school education.

All 10 Agriculture Teachers completed bachelor's degrees. Seven also completed advanced degrees. All 12 Professional Management Educators had completed advanced college degrees.

The Other Professional Workers were the most varied in former educational experiences of all 5 groups. They varied from less than high school to advanced degrees at college, with one having spent the equivalent of 5 or more years in apprenticeship and other related education. The majority--

Table 8. Levels, Major Emphasis, Recognition and Time of Receipt of Formal Education by Each Type of Respondent

Levels of formal education received	Number of each type of respondent				
	Expert managers	Other managers	Agriculture teachers	Professional management educators	Other professional workers
	n=17	n=15	n=10	n=12	n=10
Less than twelve grades, but with some post-high school	1	1	-	-	-
Grade 12 or less with no post-high school	9	10	-	-	2
Grade 12 plus some post-high school, but less than a bachelor's degree level	6	2	-	-	2
Grade 12 plus a B.S. or B.A. (or equiv. four years)	-	1	3	-	4
Advanced degrees (M.S., M.A., M.B.A., Ed.D., Ph.D., D.V.M.)	1	1	7	12	1
All others equivalent to five or more years beyond high school	-	-	-	-	1
Major emphasis of formal education received beyond high school					
Not applicable	9	10	-	-	2
Education	-	-	2	-	-
Agricultural enterprise (such as dairy)	3	2	5	5	2
Business administration (or related economics)	1	1	1	3	1
Combinations of educ., agr., and/or bus. adm.	3	-	5	7	5
Unrelated to educ., agr., or bus. adm.	1	2	1	-	2
Recognition received for post-high school education					
Not applicable	9	10	-	-	2
Unknown or none awarded	6	3	2	-	2
Certificate of completion (less than B.S. or equiv.)	1	-	-	1	1
Arts degree (excluding any agr. educ. or extension degrees)	-	1	1	1	1
Science degree (including D.V.M., ag. ed. & ext.)	1	2	10	12	4
Bus. adm., law or related degree	-	-	-	1	-
Other types (not included above)	-	-	-	6	1
Time of receipt of formal post-high school education					
Not applicable	9	10	-	-	2
Before 1960	8	4	5	10	6
1960 through 1964	-	1	2	1	1
1965 through 1969	-	-	2	1	-
1970 or 1971	-	-	1	-	-

6 out of 10--had completed some college degree or equivalent. Thus among the 5 groups there were great variations in levels of education completed. Respondents in each type tended to cluster at one specific level, however, with the exception of the Other Professional Workers. If level of former education was influential upon responses, differences between groups of respondents should have reflected the wide variations experienced.

Major emphasis of formal education received beyond high school varied considerably within all five types of respondents. Agricultural enterprises were most common, within all types of respondents. Expert Managers and all 3 educators groups combined agricultural enterprises with either education and/or business administration.

Of those managers who reported receipt of post-high school education, the majority failed to indicate any certification, diplomas, or degrees awarded. The 10 agriculture teachers all received science degrees, as did all 12 Professional Management Educators. Six of the latter group went on to secure doctor of philosophy degrees, one also received a degree in the area of business administration. Four Other Professional Workers received science degrees, which was the most common type of recognition for this group.

The time elapsed since formal education had been received was another factor considered to be potentially significant as an influence on differences in responses of various

respondent groups. However, with the exception of Agriculture Teachers, very few, if any, respondents within any group had received formal education after 1960. No Expert Manager, and only one Other Manager had received formal education after 1960. That one Other Manager had completed his education prior to 1964, or more than six years prior to participating in this study. Out of the total number of 64 respondents, only 4 had received any formal education after 1964, or within seven years preceding the time of participation in this study. This would appear to indicate that little, if any, updating of formal education has been customary for any of the groups other than Agriculture Teachers.

- E. Helpful former management training had been perceived by some individuals as nonexistent. Others readily identified one or more types and sources of training as major factors in their past experiences contributing to their success as managers. Since opinions varied on the relative importance of former training for management it was chosen as one factor to be studied in various respondents. Table 9 consists of a frequency distribution of responses by type of respondent. It includes up to three separate responses per person in each portion. While some individuals could not identify any single past experience as having been helpful, others identified up to three different types, sources, durations and periods of time when the training was received.

Table 9. Types, Duration, Sources and Times of Receipt of Helpful Former Management Training by Each Type of Respondent

Types of helpful former management training	Number of each type of respondent				
	Expert managers	Other managers	Agriculture teachers	Professional management educators	Other professional workers
	n=17	n=15	n=10	n=12	n=10
None reported	1	-	-	2	-
Short course or workshop	7	5	3	3	5
Formal course (three mos. or longer)	1	-	5	5	4
In-service (on-the-job)	8	8	4	2	1
Exchange of ideas with others	1	2	-	1	-
Work experience doing the job	10	8	6	2	6
Misc. not listed above	1	2	-	-	-
Duration of helpful former management training period					
None reported	1	-	-	2	-
One to three days	4	4	2	2	6
Four to six days	1	2	-	-	4
From one to three weeks	2	-	1	3	1
One to three months	2	-	1	1	1
More than three months (concentrated)	1	-	3	6	2
More than three months (intermittent)	14	13	7	4	6
Sources of helpful former management training					
None reported	1	-	-	2	-
University or college	4	4	5	6	3
Local public schools	1	1	1	-	1
Cooperative extension serv.	1	2	2	-	-
Private business firm (other than employer)	2	3	2	1	1
Employing organization or business	14	11	7	4	9
Misc. combinations not listed above	1	2	1	-	1
Times of receipt of helpful former management training					
None reported	1	-	-	2	-
During past two years	1	-	-	1	-
Two to five years ago	3	1	1	3	3
Over five years ago	10	6	6	10	3
Combination of from two to more than five years ago	-	-	3	-	-
Combination of from one to five years ago	-	2	1	-	1
Continuous for five or more most recent years	11	8	3	1	8

The mode for all groups except Professional Management Educators was a combination of work experience doing the job of managing, over an intermittent period of more than three months duration with the employing organization providing the training. For both groups of managers, the period of time when training was received was most often covering the five-year period preceding participation in this study. The second most common time identified by managers was over five years prior to the time they participated in this study. Both groups of managers being predominantly self-employed owner-operators of agribusinesses, were in effect saying that their own past work, and in some cases training provided by their parents in the family business were the most helpful of any training received.

Both groups of managers considered inservice (on-the-job) training of one to three days duration provided by a university or college as having been helpful. Most of this type of training was received more than five years prior to participation in this study.

The Professional Management Educators indicated formal courses of more than three months duration of concentrated study provided by a university or college more than five years prior to participation as their most frequently identified helpful former training in management.

In general, agriculture teachers listed their work experience on the home farm and/or related agribusiness prior to

college as most frequently identified helpful training, with college management courses nearly as frequently mentioned.

As a generalized summary of former training perceived helpful, Professional Management Educators gained their training for management in a theoretical setting at college, while other groups primarily gained theirs from work experience in agribusinesses. The one exception to that generality was the group of Agriculture Teachers, who secured their helpful training from both their theoretical and practical experiences.

- F. The educators in the study had a responsibility to transfer knowledge, skills and attitudes related to management to the groups being taught. Normally, one of the considerations in designing potential future educational programs is the former training already acquired by prospective enrollees. As one approach to securing this information, the decision was made to determine respondents' perceptions of helpful former training perceived for teaching management. Table 10 shows the frequency distribution of responses from the three educator groups.

Agriculture teachers identified more varied types of helpful training than either of the other groups. Although three agriculture teachers indicated no helpful former training for teaching management, in-service (on-the-job) types (presumably annual conferences), followed closely by workshops, and work experience teaching were identified as helpful former training for teaching management. Since nearly equal numbers

Table 10. Types, Duration, Sources and Times of Receipt of Helpful Former Training for Teaching Management by Each Type of Educator

Types of helpful former training for teaching management	Numbers of each type of respondent		
	Agriculture teachers	Professional management educators	Other professional workers
	n=10	n=12	n=10
None reported	3	6	7
Short courses or workshops	3	2	1
Formal courses	2	3	2
In-service (on-the-job)	4	2	-
Exchange of ideas with others	-	-	-
Work experience teaching	3	1	-
Misc. not listed above	-	-	-
Duration of helpful former training for teaching management			
None reported	3	6	7
One to three days	2	1	-
Four to six days	2	1	-
One to three weeks	4	2	-
One to three months	2	1	1
More than three months (concentrated)	1	3	2
More than three months (intermittent)	3	-	-
Sources of helpful former training for teaching management			
None reported	3	6	7
University or college	3	4	2
Local public schools	-	-	-
Cooperative extension service	-	-	-
Private business firm other than employer	-	-	-
Employing organization	2	1	1
Misc. combinations not listed	4	2	-
Times of receipt of helpful former training for teaching management			
None reported	3	6	7
During past two years	-	-	-
Two to five years ago	3	1	-
Over five years ago	-	4	3
Combination of two to over over five years ago	2	-	-
Combination of one to five years ago	1	1	-
Continuous for five or more most recent years	2	3	-

of responses were secured from teachers as to durations of different types of training there have evidently been several alternatives available to this group. Either few attended sessions available, or there were differences of opinions as to the effectiveness of the former training received.

Miscellaneous sources not listed were identified by four of the agriculture teachers for helpful former training for teaching management. Three named a university or college as next most frequently identified source, and two named their employing organization (in both cases the university) as sources of helpful former training for teaching management. All teachers who perceived former training for teaching management as helpful said that the help was received within the five years preceding participation in this study.

Half of the Professional Management Educators indicated that they could not identify any helpful former training for teaching management. This tends to indicate that no teacher education is required for employment as joint college teaching and extension work. The six who indicated having received helpful former training listed several types. These included on-the-job inservice training, work experience doing the job of teaching, short-courses or workshops and three indicated formal courses of more than three months duration provided by a college. The most common time of receipt of the helpful training was more than five years prior to participation in this study.

Of the ten other Professional Workers, seven reported no helpful former training for management education. Two had received formal college courses of more than three months duration. One indicated that a workshop of from one to three months duration provided by his employing organization had been helpful. All three indicated that no helpful training for teaching management had been received during the preceding five years.

From the limited numbers of respondents in each group, generalizations must be made with reservations. However, the responses seem to indicate that little if any helpful former training for teaching management has been acquired by either the Professional Management Educators or Other Professional Workers.

- G. Plans for providing future educational programs should take into consideration past work experiences of potential enrollees. The possibility of differences in responses being related to employment was also considered. In addition, criteria for placing individuals into one of the five types of respondents required knowledge of past and present employment records.

Table 11 summarizes the past employment of respondents. For each type of employment the number of individuals, the span of years worked by individuals from the shortest to longest period any single respondent was employed, and the mean number of years worked by all respondents in each group were recorded. By studying the accumulated information across types of

Table 11. Numbers Employed, Range and Means of Years of Employment by Each Type of Respondent, in Various Conditions of Past Work Experienced

Past work conditions	Types of respondents														
	Expert Managers			Other Managers			Agriculture Teachers			Prof. Mgt. Educators			Other Prof. Workers		
Experienced in: (N=64)	Number (n=17)	Range from (years)	Mean years worked	Number (n=15)	Range from (years)	Mean years worked	Number (n=10)	Range from (years)	Mean years worked	Number (n=12)	Range from (years)	Mean years worked	Number (n=10)	Range from (years)	Mean years worked
Farming	15	5-53	25.1	13	2-40	21.4	10	1-14	7.8	4	1-6	1.3	9	4-30	9.5
Agriculturally related commercial firms	13	1-45	17.4	9	5-35	3.9	1	1	0.3	2	3-24	2.2	5	2-17	5.2
Agriculturally related non-profit institutions	1	26	1.5	-	-	-	-	-	-	1	1	0.1	2	12-20	3.2
Agriculturally related government agencies	3	9-18	2.1	2	1-2	0.2	10	1-38	17.4	12	1-35	21.3	5	4-42	9.5
Non-ag. related commercial firms	6	1-26	2.6	5	7-20	3.8	3	1-4	0.6	1	1	0.1	4	1-10	2.0
Non-ag. related, non- profit institutions	-	-	-	-	-	-	-	-	-	-	-	-	1	5	0.5
Non-ag. related government agencies	4	3-30	2.5	4	2-8	1.1	2	2-3	0.5	1	5	0.4	5	1-8	1.8
Self-employment	16	6-53	22.2	14	2-43	19.2	2	10-49	5.9	-	-	-	5	1-20	5.9
A farm manager's job	7	6-53	17.2	11	10-43	15.3	4	1-40	6.9	2	1	0.2	3	5-20	4.5
A medium or top non-farm manager's job	11	3-36	9.7	7	1-33	5.1	1	49	4.9	1	15	1.2	9	5-22	10.2
A medium or top level manager's job for the present employer	11	3-35	9.9	6	1-27	3.8	1	42	4.2	-	-	-	9	5-21	10.1

respondents for each type of employment, and likewise studying each group by types of past employment, some similarities, and some differences appear between groups.

Fifteen of the seventeen Expert Managers had a mean of 25.1 years in farming. This was the largest mean for any single group in any type of employment. Thirteen of the fifteen Other Managers had a mean of 21.4 years in farming. The Vocational Agriculture Teachers are required by law to have had work experience in agriculture to be eligible for teacher certification. However, it was interesting to note that all ten agriculture teachers, including extension service personnel, all had some farming experience. By way of contrast, only four of the twelve Professional Management Educators--the teacher educators--had worked in farming. The longest anyone of them had worked in farming was six years. The mean years worked by this group was 1.3 years. Nine of the ten Other Professional Workers had a mean of 9.5 years in farming.

Even when comparing past work experience of the five groups in agriculturally related commercial firms, the Professional Management Educators had only three of the twelve with any work experience. Their mean number of years--2.2--was next to the lowest of any group. Agriculture Teachers, with only one individual having had experience for only one year showed a mean of 0.3 years in commercial firms related to agriculture. If, as was indicated by respondents in identifying former helpful training in management, the best source

of help is on-the-job work experience, the educators appear to be lacking one of the most important aspects of training for teaching management.

The Expert and Other Managers had work experience in farming and/or agriculturally related commercial firms, however, nearly all of them have been self-employed much of their working lifetime. Since all of these people are managers of small, rural agribusinesses, they are in fact their own teachers for on-the-job training. Outside influences bringing about innovative changes have been very restricted under these conditions.

The most diversified work experience record of any single group of respondents was achieved by the Other Professional Workers. Five, or half of the group had worked in 4 or more types of employment--farming, agriculturally related commercial firms, agriculturally related government agencies, and non-agriculturally related government agencies. This type of diversity, blended with the theoretical backgrounds of the other two groups of educators, and the practical experiences of the managers could work to the advantage of all concerned if they were brought together for managerial education purposes.

- H. Ages of individuals being related to personal achievement capabilities, and aspirations was perceived to be a factor which may influence opinions and perceptions of importance of specific management function requirements for success.

Age also has an influence upon interest in future training. Therefore, a wide range of years was considered desirable if concepts and/or competency areas were to be identified which were deemed to be required by a majority of managers and teachers of management.

Table 12 gives a frequency distribution of ages as reported by types of respondents. A quick glance at the table confirms the fact that a very satisfactory range in ages was achieved in each group within the sample. Managers and Professional Management Educators tended to be older than the Agriculture Teachers and Other Professional Workers. But in all groups at least a thirty-year range in ages occurred.

- I. Being closely related to age, health also has a direct bearing on personal capabilities and aspirations, and therefore was perceived to be a factor which could influence perceptions of need for management education. For the purpose of this study a wide range in health of participants was considered desirable. Table 12 gives a frequency distribution of self-evaluations of current status of respondents' health at the time of involvement in this study. The range of responses to this item on the instrument was not as large as hoped for. Only four individuals in the total sample of sixty-four rated their health as fair. One did not respond on this item, but of the remainder who did respond, twenty-five considered themselves in good health, and thirty-four said they were in excellent health.

Table 12. Numbers Reporting Various Ages, Plus Self-evaluations of Personal Health, by Each Type of Respondent*

Ages reported by each respondent at the time surveyed	Numbers of each type of respondent				
	Expert managers n=17	Other managers n=15	Agriculture teachers n=10	Professional management educators n=12	Other professional workers n=10
Unreported	-	-	-	-	-
Under 15 years of age	-	-	-	-	-
15 to 24 years of age	-	-	1	-	-
25 to 34 years of age	1	2	2	1	1
35 to 44 years of age	3	3	3	2	5
45 to 54 years of age	6	8	1	5	3
55 to 64 years of age	5	2	3	4	1
65 and older	2	-	-	-	-
Self-evaluations of personal health					
Unreported	-	1	-	-	-
Poor	-	-	-	-	-
Fair	-	1	1	-	2
Good	10	6	1	6	2
Excellent	7	7	8	6	6

*N=64

Since the respondents selected themselves, in the sense that they had to complete an instrument to be considered part of the sample this result is not surprising. Several people volunteered the reason they did not want to participate in this study was due to their poor health. The number who were invited but did not participate for the reason of poor health is not known.

From the standpoint of planning potential educational programs based upon perceptions of needs of potential recipients, those who will not or can not participate due to ill health are of no concern, unless the education is specifically designed to meet individual needs of handicapped people. For designing educational programs to be attended by people with different personal situations but based upon common needs, the respondents involved in this study probably served as well as any group which might have been selected by another method.

- J. Personal self-evaluations of success both in personal life achievements and in their roles relative to management of small, rural agribusinesses was required as one measure to identify whether or not an individual was to be considered one of the Expert Managers. Since the same instrument was used for all respondents, all types of individuals were asked to rate themselves. It was believed that self-evaluation, by personal standards might be an influencing factor upon actual achievement. In other words, if a person perceived

himself as very unsuccessful, that attitude or self-evaluation might be partially responsible for low achievement.

Table 13 consists of the frequency distribution of self-evaluations by types of respondents as to their own perceptions of personal and occupational success. Only two people--one Other Manager and one Other Professional Worker perceived themselves to have usually been unsuccessful. One said he was successful in achieving personal aspirations, but unsuccessful in his managerial role. The other one reversed his responses saying that he was unsuccessful in achieving personal aspirations, but considered himself successful in his role related to management.

The largest number of all five groups rated themselves as successful in both personal and management related roles. Forty-nine said they were usually successful in personal achievements, and thirteen said they were very successful. Several were more conservative in self-evaluation of success in relation to management. Only eight said they were very successful and fifty-four rated themselves as usually successful in their management related achievements.

Since management improvement was assumed to be a major reason for proposing managerial training based on potential recipient perceptions of need, more individuals who perceived themselves less than successful would have been desirable in this study. However, if an individual who perceived himself as unsuccessful does not utilize available

Table 13. Numbers Reporting Various Self-evaluations of Personal and Occupational Success by Each Type of Respondent*

Responses evaluating personal life achievement success	Numbers of each type of respondent				
	Expert managers n=17	Other managers n=15	Agriculture teachers n=10	Professional management educators n=12	Other professional workers n=10
No response	-	-	-	-	-
Very unsuccessful	-	-	-	-	-
Unsuccessful	-	1	-	-	1
Successful	15	11	6	8	9
Very successful	2	3	4	4	-
Responses evaluating occupational success	Responses evaluating occupational success				
	Expert managers n=17	Other managers n=15	Agriculture teachers n=10	Professional management educators n=12	Other professional workers n=10
No response	-	-	-	-	-
Very unsuccessful	-	-	-	-	-
Unsuccessful	-	1	-	-	1
Successful	15	13	9	8	9
Very successful	2	1	1	4	-

* N=64

aids to self-improvement this may have been a major factor in explaining the small number of respondents who participated. The fact that they did not perceive themselves as successful may have influenced their decision not to respond. In three cases this was stated as the reason for not doing so.

After the series of group interview meetings failed to secure participation by what was considered sufficient numbers of non-expert or Other Managers, personal contacts were used, or in several cases attempted without success. Several respondents were obtained in this manner, however.

Another factor which may have had an effect on the lack of unsuccessful respondents has been referred to earlier. That factor was the decision to have only one letter of invitation to group interviews sent by the host agriculture teacher in the community where individuals resided. If the unsuccessful managers never worked with that single individual, his invitation to attend may not have had much drawing power. By contrast, if three or more people invited an individual to participate, it may have resulted in more participation by the unsuccessful individuals. If any comparable study, or follow-up of this study is to assure involvement of the unsuccessful people, different methods should be considered for getting their involvement.

DESIGNING THE INFORMATION COLLECTION INSTRUMENT

The original idea for designing the instrument which ultimately was used stemmed from participation in a vocational education administration course based upon the sensitivity areas Dr. Lawrence Borosage had identified.¹³ A brief proposal for a potential study, with a preliminary format of the instrument was presented to a seminar for agriculture education graduate students. Receiving favorable reactions from this group, a proposal for a research project was presented to a joint staff meeting of State Vocational Agriculture Education Consultants and the Agriculture Education Faculty at Michigan State University which included the second draft of the instrument format which incorporated suggestions from the graduate student seminar. Receipt of tentative approval, or at least interest in more detailed information from the joint staffs, led to the presentation of a formal research project proposal which was submitted to and approved by the Vocational Education and Career Development Division of the Michigan Department of Education. The proposed project included the design of an instrument for use in securing information from managers and educators involved with small, rural agribusiness management.

An instrument was designed to be administered to a jury of experts. This draft identified the major component areas, with a group of concept and/or competency items identified in the review

¹³Lawrence Barosage, "A Basis for Viewing Communications," The National Elementary Principal, XLI, No. 7 (May, 1962), 6-12.

of literature, which were considered to be important enough to have been written about by many authors discussing many aspects of management. Few references could be located which specifically dealt with requirements for successful management of small, rural agribusinesses. Therefore, any concept or competency area identified by any author was deemed worthy of inclusion for the consideration of a jury of experts. Provision was made for additions, deletions, changes in wording, format, or any other suggestions the jury might make.

Prior to administration to the jury of experts, the instrument was once more presented to the seminar for graduate students in agriculture education. Finding no serious flaws, this group of students filled out the instrument as a pre-test of its workability and to test the time required for its completion.

As discussed earlier¹⁴ group interview meetings were conducted in Allegan and Branch counties. All of the people identified by ten local agricultural leaders as potential expert managers of small, rural agribusinesses were invited to participate in this series of meetings. From the group who participated, thirty-one experts were identified as a sub-jury of Expert Managers.¹⁵ The other participants were considered to be a field test group, to spot needed changes for clarity and workability.

Concurrently, with the series of meetings in Branch and Allegan counties, individual contacts were made to Michigan State

¹⁴See pages 73-74.

¹⁵See pages 74-76 for a description of this sub-jury.

University Extension Service staff members named by their Personnel Director as potential experts. From this group of twenty-seven, twelve were identified as experts and constituted the sub-jury of Expert Professional Management Educators.¹⁶

Suggestions from all of the above groups, plus the Project Director and doctoral committee chairman, were considered in designing the final draft of the instrument, a copy of which is Appendix E. Details of suggestions and comments by jury of expert members were included in the companion report prepared by Meaders and Ferguson.

PROCEDURE FOR INFORMATION COLLECTION

Description of Collection Process

Being an integral part of the process for identifying individuals for inclusion in one of five groups of respondents, much of the detailed description of the procedure for collecting information was included earlier.¹⁷ Only a brief description of the sequence of events and details not previously mentioned will be included in this portion of the dissertation.

Group interview meetings. All expert and other managers of small, rural agribusinesses, agriculture teachers, district extension service personnel, and other professional workers who had not

¹⁶See pages 75, 77-79 for a description of this sub-jury.

¹⁷See pages 71-84 for added details of this procedure.

participated in the earlier series of meetings (when the Manager Jury of Experts members were selected) were asked to participate in a series of group interview meetings. These meetings were conducted at four locations in Branch County and five locations in Allegan County. They were held on different days of the week, and in the morning, afternoon and evening at each location, to allow as much flexibility for people to attend as possible. These meetings were conducted between March 29 and April 9, 1971. Due to several freezing rain and sleet storms during the period when the meetings were held and the pressure of spring work, several were unattended. Others involved from one up to twelve people.

At each group interview meeting, a light snack and beverages were available when people arrived, to help get an atmosphere of informality and cordiality developed and keep early arrivals from being bored prior to the appointed starting time. Participants were encouraged to serve themselves at will throughout the meeting.

Each meeting was opened with an overhead projector illustrated introduction to the project, its purpose, and general procedures employed. Instructions were given for individuals to complete the instrument, prior to its administration. This introduction took approximately twenty minutes. It usually evolved into a brief discussion period, followed by continued question and answer interchanges between the research worker and individuals. Completion of the instrument, if no time was taken for discussion with other participants or the person conducting the meeting, usually involved from thirty to forty-five minutes for most participants. Due to the

interest created by items on the instrument, many people spent more time discussing concepts, specific examples and/or experiences relative to items on the instrument than completing the form. From these discussions some interesting comments were recorded, and may be found on pages 119-20.

Individual conferences by prior appointment. During the same period of time, instruments were delivered to individuals at Michigan State University. Appointments were arranged in advance, to provide a period of introduction and instruction time. Each Professional Management Educator was then asked to set a time when the completed instrument could be picked up. Except for two people who would, or could not arrange such an instructional appointment, this process apparently worked satisfactorily. However, it did not provide the interchange of questions, answers and discussion possible with group interviews. Several individuals evidently failed to listen to instructions carefully, and the instrument was evidently not clearly designed to avoid some misunderstanding of what was intended under these conditions. Comments from some of the people who did not completely fill out their instruments were also recorded and may be found on page 121.

Unscheduled visits at places of business. Following the initial period of information gathering, a review of completed instruments revealed several categories of business types without representatives in the sample. As planned in the design of the study, at least one representative from each category was considered necessary if the purpose of the study was to be achieved. Therefore, two individuals from each unfilled category were contacted on

unscheduled visits at their places of business. Each individual was given introductory information and asked to participate. If they agreed, instructions were given for completion of the instrument. Whenever permissible, a time was set for a return visit to pick up the completed instrument, or if desired, to explain it more completely and allow completion of the instrument prior to collecting it. In several cases, the individual preferred to mail the completed instrument rather than arrange to have it picked up. In these cases, a stamped, addressed envelope was provided.

Although time consuming and costly, the follow-up procedure did provide several responses which improved the diversity which was sought among all groups of respondents. Some individuals, when contacted personally declined when asked to participate, but most of those contacted were apologetic for not having participated in one of the group interview meetings.

Evaluation of Collection Process

Providing diversity amongst respondents was a major objective of sample selection. The description of respondents discussed on pages 88 to 112 indicated the degree to which diversity was achieved. The information collection process had a direct influence upon the diversity achieved within the time, and financial restrictions placed upon the research worker. Within a very brief period of time, and working on a limited budget, as many responses as possible were to be secured.

Group interview meetings, individual conferences made with previously arranged appointments, and unannounced visits to places

of employment were the three techniques used for collection of information.

Group interview meetings. During the planning phase of this study, the need for a means to secure as large numbers within each group of respondents as possible within a short period of time was recognized. The utilization of group interview meetings was chosen as a first attempt to reach large numbers of people in a brief period of time. When used in February, to contact potential jury of expert members, and to field test the instrument being designed, the group interview meetings proved to be very economical and time saving. As many as twenty-three completed instruments were secured at one meeting. Compared with individual conferences, this approach proved to be very effective. However, by March 30, through April 5--the period when group interviews were used to contact sample respondents--the effectiveness of group interviews was reduced. Only approximately twice as many contacts were made at that time of year as could have been made by individual contacts. Twenty-five responses were secured at twelve meetings. This was more efficient than either of the other two procedures, however.

In addition to reducing contact time requirements, group interview meetings provided opportunities for interaction between participants. Lively discussions resulted in increased understanding of the project, as well as increased interest on the part of participants. Another benefit was the information acquired through the discussions. Problem areas on the instrument being administered were easily identified as people questioned and discussed such

issues as the terms used for alternate responses. Frequently during the second series of meetings one person would state that "very important" was not a strong enough term to adequately express personal opinion about specific items on the instrument. Invariably the consensus of the group would confirm this weakness in the instrument. Several groups came to the same conclusion--if the instrument was to be used in the future, a different alternative response should be used. They concluded that "absolutely required," "mandatory" or most often "Essential" should be the highest level of need.

By having several local agriculture leaders send invitations to individuals to encourage participation, Expert Managers were encouraged to attend and participate in the project. Had this procedure been followed for the second series of meetings larger numbers of both "Expert" and "Below Average" managers probably would have attended. Several people at the first series of meetings commented to the effect that they were not planning to attend after receipt of one invitation, but as two, three, or more invitations arrived they decided to attend.

Individual conferences by prior appointment. Professional Management Educators, and some Other Professional Workers were contacted at previously arranged individual conferences. No other approach was considered workable for people accustomed to working by appointment.

Individual interviews were not perceived to be as desirable as group interviews for several reasons. First, they were extremely time consuming for the interviewer. Interaction between participants

was not possible, and as a result enthusiasm was not stimulated to the degree observed at group interviews.

Private interviews did result in collection of information from a group which would probably not have participated if other techniques had been used, however. In both the first and second series of contacts, two individuals were not able to be committed to an interview, so written instructions and explanations were left with the individuals' secretaries in hopes that they would be able to secure the cooperation of their "bosses." In all cases the instruments were either ignored or returned by mail with notes attached, indicating that they did not know what was being sought. As one expressed it: "I'm just not in the same ball park as your questionnaire. I'm sure you can find someone else who understands better than I do what you are trying to get at."

Another individual started to complete the instrument, found himself writing notes in the margin next to several items, and finally quit, sending the partially completed form by mail, stating that he did not know what the items were talking about. These few cases were adequate to prove that the instrument, designed as it was, did not have adequate instructions or clarity to allow a mail-back approach to information collection.

By contrast, under interview conditions uncertainty could be quickly eliminated and responses could be made on all items. Even in situations where time conflicts prevented immediate completion of the instrument, instructions given at private conferences resulted in most forms being returned in usable condition. In two cases, however,

four personal trips to pick up completed forms failed to yield results. No explanations were given, but lack of understanding of the instrument may have been the reason in both cases.

Unscheduled visits at places of business. Follow-up of group interview meetings were required in Allegan and Branch counties to secure participation from individuals. Adequate diversity within groups, and numbers of total responses were not sufficient. Time limitations prohibited lengthy postal service scheduling of conferences, and long-distance telephone calls to schedule conferences would have been too costly. The decision was made to contact two potential respondents from each type of business not having been represented at the second series of meetings.

Sixty visits were attempted, without prior appointments. Fifty instruments were delivered for either completion at the time of first contact to be picked up at an arranged later date, or to be mailed back by the respondents. Thirty-one completed responses were received from these efforts.

As with both of the other methods used, some responses were never secured by unannounced visits to places of employment. As a result, one area--livestock marketing--was not represented by an Expert Manager. Other managers were not secured for two types of businesses--Recreation Agribusiness and Crop Marketing as a single emphasis. Crop marketing was a part of the emphasis in at least one business, however.

By utilizing three techniques for collecting information, a total of sixty-four responses were obtained in the second series

of contacts soliciting participation by five groups of respondents. Larger numbers of participants would have strengthened the study. However, adequate diversity was achieved within each group even though the sample number was small.

The first series of contacts used to secure participation by a jury of experts, and a field-test group of people similar to respondents, yielded a total of 128 people. Coupled with the 64 in the second series of contacts, people involved in the field-operations came to a total of 192 individuals. These were contacted during the period from February 15 to May 23, 1971. All contacts were made when the research worker was not busy carrying a full-load of course-work on campus at the university. Without use of the group interview procedure, this would have been humanly impossible, considering the driving time involved between the campus and the two counties where data were collected.

Previous experiences dealing with adults in agribusinesses, and the results obtained at meetings held in February compared with those held in April, led to the conclusion that the process used was effective. The major problem was not process but timing. A process similar to the one used if begun in late November, and completed by mid-March would undoubtedly have resulted in greater participation than was achieved in this study.

INFORMATION TREATMENT AND ANALYSIS

Information was checked for completion and minor omissions were checked on by telephone, and responses thus gathered were

recorded on the instrument. If a large portion of the information was lacking, indicating lack of willingness to provide the requested responses, the instruments were not included in the sample. In a few cases, where the type of recognition for former education was omitted, as an example, that type of omission was treated as "unreported."

All information from completed instruments was transferred to key punched computer cards for analysis. Errors were corrected in the cards by carefully checking the print-out readings from each card against the information on the original instrument. Frequency distributions and percentages were then obtained for each group of respondents.

A one-way multivariate analysis of variance programmed by Jeremy Finn, State University of New York at Buffalo, was used to test for significant differences between the mean responses of the Expert Manager group and each of the other four groups--Other Managers, Agriculture Teachers, Professional Management Educators, and Other Professional Workers. Significance at the .05 level was established as the basis for determining when differences occurred.

Means of responses for each item were arranged in rank order of Expert Managers' responses, with means of the other four groups recorded for comparisons. Means were computed by applying numerical values to response alternatives: 4 = very important; 3 = important; 2 = of unknown importance; 1 = of little importance; and 0 = of no importance.

Since no evidence exists that equal distances occur between items, arbitrary values applied were considered to be questionable as a basis for developing future educational programs. Use of these values allowed items to be placed in rank order, but could not be proven to be true intervals. An alternate to rank order of means as a basis for educational program planning was provided through establishment of items ranked on the basis of percentages of responses from Expert Managers in the two highest levels of importance response alternatives--"Important," and "Very Important." The use of percentages was shown to provide more accurate ranking of items than use of means.

SUMMARY

The design of the study and methodology used to determine the degree of importance of management function concept and/or competency areas, and future training about those areas required for personal success were discussed in Chapter III. Perceptions of five groups--Expert Managers, Other Managers, Agriculture Teachers, Professional Management Educators, and Other Professional Workers--as to their needs for performing their respective roles relative to small, rural agribusiness management were obtained.

The population was restricted to the five groups mentioned above, located in three geographic areas--Allegan County, Branch County, and Michigan State University campus. Choice of these locations was based upon a study of types of farms (and by assumed association, types of supportive agribusinesses) located in

predominantly rural counties in Michigan. To achieve the greatest amount of diversity in the population, within a relatively accessible, yet restricted geographic area, census data were utilized in selecting the population.

Accurate knowledge of the total numbers of different types of members in the total population was lacking. A process for sample selection had to be devised which did not rely on knowledge of total population individual identities. The process used, in brief, started with involvement of three Vocational Agriculture teachers and the County Extension Service Director from each of the two counties. These eight people each named two other leaders from their respective communities. The twelve were asked to identify from one to three managers perceived to be the experts from each of fifteen clusters of small, rural agribusinesses. Each potential expert was invited by the people identifying him, to attend one of a series of group interview meetings. At these meetings, participants completed, and made suggestions for improving the instrument administered. The people who met criteria to qualify as experts composed a sub-jury of Expert Managers of small, rural agribusinesses of diverse types.

A second sub-jury, composed of joint extension and campus faculty members, were selected. The University Extension Service Personnel Director identified twenty-seven individuals as potential Expert Professional Management Educators. Twelve who met previously established criteria were identified as experts. Each one completed the instrument administered through individual conferences having

been arranged by appointments. Each one also contributed suggestions for instrument improvement.

The combined opinions of the two sub-juries of Expert Managers and Expert Professional Management Educators established 120 separate items required for success in their roles associated with small, rural agribusiness management. Basic management and agricultural technology concept and/or competency areas gleaned from the review of literature were used to design an opinionaire.

The final draft of the instrument was designed through a sequence of designing and testing two drafts, using a group of nine agriculture education graduate students, and their seminar leader, as an advisory group. The jury of experts then made their contributions. Twelve groups similar to respondents were used to field-test the instrument under conditions similar to those planned for final draft administration to the sample.

Above average and expert managers identified prior to, but who were not participants in, the first series of group interview meetings were invited to attend a second series of meetings for collection of information. In addition, a group of county leaders identified lists of below average managers from the same geographic areas, and types of businesses from which Expert Managers were selected. These people were also invited to attend one of the second series of group interview meetings. Other people participating in these meetings included agriculture teachers, county and district extension service personnel and some others who worked for various government agricultural agencies.

The individuals who attended meetings were placed in one of the five types of respondent groups--Expert Managers, Other Managers, Agriculture Teachers, Professional Management Educators, or Other Professional Workers for purposes of analysis of information collected. Campus based Professional Management Educators who had been named, but had not qualified as experts were contacted at pre-arranged individual conferences to secure information. In addition to campus based people, some of the Other Professional Workers group who had not attended group interview meetings were contacted by setting appointments for personal conferences at their places of employment.

A third process for gathering information was used as a follow-up procedure. Lack of earlier participation left several types of business managers unrepresented in the sample. To assure the diversity required to determine significant differences (if any existed) between groups, more respondents had to be secured. Personal visits were made to places of employment without prior scheduling of those visits.

By the combination of the three information gathering techniques, a total of sixty-four respondents were secured. They were described in detail, as to how the five groups were similar, and different from each other. Variations between individuals within groups were also detailed. Frequency distribution tables showing responses and numbers of each type of respondent were discussed on the following factors: location of respondents, types of agribusiness involvement, employment status of managers, formal education

received, helpful former management training received, helpful former training for teaching management, former work experience, age, health; and self-evaluations of personal as well as management associated occupational success.

Individuals' responses showing their perceptions of importance of each of the items within each component area for success in their personal roles, and importance of future training about each item, for their personal success, were transferred to key punch cards, and errors corrected.

Frequency distributions and percentages of responses were obtained for each item, by types of respondents. From these, the percentages of responses in the two upper response alternatives from a five-item scale were added together. A table was created showing the rank order of the items, based upon those combined response percentages from the Expert Manager group. Similar percentages of responses from each of the other four groups were reported for comparisons.

A one-way multivariate analysis of variance programmed by Jeremy Finn was used to test for significant differences in mean responses on all items within each of seventeen component areas, between Expert Managers and each of the other four groups of respondents.

Mean responses on each item from the Expert Manager group were used as a basis for listing in rank order each item within each of seventeen component areas. Mean responses from each of the other four groups were shown for comparisons.

CHAPTER IV

REPORT OF FINDINGS

The purpose of this study was to develop rank-ordered lists of required managerial and agricultural technology areas of concepts and/or competencies, and needs for future training in those areas, as perceived by individuals providing training for, or managing small, rural agribusinesses. The items to be ranked had been identified by a jury of experts as required for success.

A test for significant differences between Expert Managers' mean responses and means from four other groups was used to determine whether or not suggestions for potential educational programs could be based upon needs not perceived to be significantly different by the five groups.

Findings have been divided into five sections: Importance to Expert Managers of Required component Areas, Significant Differences in Perceived Importance for Success, Perceived Importance of Future Training, Significant Differences in Perceived Importance of Future Training, and a Summary.

IMPORTANCE TO EXPERT MANAGERS OF REQUIRED COMPONENT AREAS

Seventeen component areas were identified as required for success in their roles by a jury of experts. The jury was composed of two sub-juries--31 Expert Managers, and 12 Expert Professional Management Educators--all of whom were involved with teaching about, or management of small, rural agribusinesses.¹

Within Agricultural Technology, four areas were identified as required for success, and thirteen areas were identified within the Management Function. No less than 50 percent of the members of each sub-jury had to agree that one or more of the items within each component area was either "Essential," or "Very Important" to identify the area as required for success, for both educators and managers, relative to small, rural agribusiness management. Table 14 illustrates that the minimum standards were met, by showing the highest percentages of both sub-juries' responses to any single item within each of the component areas.²

An instrument for collection of information, based upon the individual items within the seventeen component areas identified by the jury of experts, asked for two responses for each item. First, people were asked to indicate the degree of importance of an item for

¹See pages 7, 8 and 10 for definitions of the jury and sub-juries. For descriptions, criteria, and methods for selection, see pages 71-78.

²For more details see the companion report by Meaders and Ferguson.

Table 14. Highest Percentages of Combined "Essential" and "Very Important" Responses by Sub-jury Members, For Any Single Item Within Each Component Area

Component areas	Highest percent of combined "Essential" and "Very Important" responses from:	
	Expert Managers n=31	Expert Professional Management Educators n=12
Agricultural Technology	Percent	
A. Agricultural Economics	75.0	83.3
B. Agricultural Mechanics	84.4	75.0
C. Crops and Soils	87.5	58.4
D. Livestock Enterprises	81.3	51.7
Management Function	Percent	
A. Goals and Objectives	87.5	83.3
B. Planning	90.7	91.7
C. Role Definition	78.1	75.0
D. Individual Differences	78.1	83.3
E. Control	81.2	75.0
F. Management Participation	81.2	75.0
G. Human Relations	93.8	83.3
H. Communications	87.5	91.7
I. Atmosphere	81.3	75.0
J. Size	59.4	58.3
K. Change	75.0	75.0
L. Standards	87.6	83.3
M. Evaluation	90.7	91.6

Source: A companion report by Meaders and Ferguson.

success; and second, the degree of importance of future training about each item for success in their respective roles relative to small, rural agribusiness management.³

Seventeen Expert Managers of small, rural agribusinesses responded on the instrument for collection of information. Combined percentages of "Very Important" and "Important" responses for all items were computed, and the mean percentages of top two responses by Expert Managers were used to rank component areas.⁴ The seventeen component areas in Table 15 are in rank order of importance for success, as determined by those means. From highest to lowest means, the areas were ranked in the following order: (1) Communications, (2) Goals and Objectives, (3) Management Participation, (4) Human Relations, (5) Planning, (6) Standards; (7) Individual Differences, (8) Role Definition, (9) Evaluation, (10) Size, (11) Atmosphere, (12) Agricultural Mechanics, (13) Crops and Soils, (14) Change, (15) Control, (16) Agricultural Economics, and (17) Livestock Enterprises.

Of special interest are the low relative rankings of Agricultural Technology areas, compared with most Management Function areas. Only two component areas from the Management Function ranked lower than the two highest ranked Agricultural Technology areas, and the other two Agricultural Technology areas were the two lowest in

³See Appendix E for a sample of the instrument.

⁴See Appendix F for mean responses from all five groups on individual items (ranked according to Expert Managers' response means) within each component area.

Table 15. Rank Order of Seventeen Component Areas, Based Upon Mean Percents of Combined "Very Important" and "Important" Responses by Seventeen Expert Managers

Management and Agricultural Technology Areas	Percent
1. Communications	92.9
2. Goals and Objectives	89.3
3. Management Participation	88.2
4. Human Relations	86.3
5. Planning	86.0
6. Standards	83.3
7. Individual Differences	79.8
8. Role Definition	78.8
9. Evaluation	77.6
10. Size	75.0
11. Atmosphere	73.6
12. Agricultural Mechanics	69.1
13. Crops and Soils	63.3
14. Change	61.0
15. Control	59.6
16. Agricultural Economics	55.3
17. Livestock Enterprises	34.0

Source: A companion report by Meaders and Ferguson.

rank of all seventeen areas. This indicates that, as a generalization, a higher percentage of the seventeen Expert Managers considered Management Function component areas higher in importance than Agricultural Technology areas for success in managing their specific types of small, rural agribusinesses.

SIGNIFICANT DIFFERENCES IN PERCEIVED IMPORTANCE FOR SUCCESS

One of the objectives of this project was to determine whether or not there were significant differences between the mean responses from Expert Managers and four other groups--(1) Other Managers, (2) Agriculture Teachers, (3) Professional Management Educators, and (4) Other Professional Workers. All individuals in these groups were selected for their involvement with management education for, or management of, small, rural agribusinesses. If educational programs were to be designed for participation of all these types of respondents, evidence would be needed to show lack of significant differences between groups. The true means of all responses from each group, on each separate item within each component area were used in computation of significant differences. A one-way multivariate analysis of variance revealed significant differences between Expert Managers, and Other Managers in the Communications component area, as indicated in Table 16. Agriculture Teachers differed from Expert Managers in only one area--Human Relations. However, due to an unidentified error, the computation for Management Participation aborted. Therefore, whether or not the two groups differed on that component area was not known.

Table 16. Significant Differences in Perceived Importance of Component Areas Required for Success by Expert Managers Compared With Four Other Groups

Component areas	Mean responses of Expert Managers vs.:			
	Other Managers	Agriculture Teachers	Professional Management Educators	Other Professional Workers
<u>Agricultural Technology</u>				
Agricultural Economics	.66	.98	.31	.81
Agricultural Mechanics	.16	.26	.03*	.53
Crops and Soils	.87	.06	.13	.07
Livestock Enterprises	.98	.99	.67	.50
<u>Management Function</u>				
Goals and Objectives	.39	.23	.89	.38
Planning	.49	.15	.16	.09
Role Definition	.67	.68	.21	.14
Individual Differences	.63	.83	.94	.42
Control	.46	.69	.68	.16
Management Participation	.69	aborted	.03*	.33
Human Relations	.41	.05*	.02*	.59
Communications	.02*	.85	.25	.11
Atmosphere	.78	.19	.76	.27
Size	.66	.63	.71	.00*
Change	.35	.43	.56	.92
Standards	.38	.51	.82	.88
Evaluation	.23	.74	.75	.79

*Areas with differences at .05 level.

Professional Management Educators and Expert Managers differed significantly on three of the seventeen component areas tested. Other Professional Workers differed from Expert Managers only on the Size area.

Since significant differences were of prime importance, only those areas where differences occurred will be discussed in detail.

Expert Managers vs. Other Managers

The means for both Expert Managers and Other Managers for items within the communications area were higher than in any of the other areas, yet they were significantly different. Generally, an observation of the two sets of means, as shown in Table 17 revealed that Other Managers rated all except one factor slightly higher than Expert Managers. Only one item--the many factors which can stop or change information before it reaches the intended receiver--was rated lower by Other Managers than Expert Managers.

Expert Managers vs. Agriculture Teachers

Human relations was the one area upon which Expert Managers and Agriculture Teachers differed significantly. Table 18 compares mean responses of the two groups on each item within the Human Relations component area. Evidently, Agriculture Teachers, as a group, did not view business ethics and relations with others outside of their organizations as influential on personal success in their respective roles as did the Expert Managers. Getting people to work up to capacity and making workers aware of

Table 17. Mean Responses* of Expert Managers and Other Managers on Communications Items

Items within the Communications area	Mean responses	
	Expert Managers	Other Managers
1. Accurate transfer of information is:	3.59*	3.80
2. Clear transfer of information is:	3.53	3.87
3. Transfer of detailed information is:	3.47	3.60
4. Two-way communications, both from the manager down, and from the laborers up to the manager is:	3.41	3.73
5. The many factors which can stop or change information before it reaches the intended receiver are:	3.41	2.87

*4 = Very Important; 3 = Important; 2 = Of Unknown Importance; 1 = Of Little Importance; and 0 = Of No Importance.

Table 18. Mean Responses* of Expert Managers, Agriculture Teachers and Professional Management Educators on Human Relations

Items within the Human Relations area	Mean responses		
	Expert Managers	Agriculture Teachers	Professional Management Educators
1. The influence of business ethics (honesty and fair dealings) on results of my activity is:	3.88*	3.30	3.08
2. Relations with others, outside my business or organization are:	3.53	2.50	2.92
3. "Customer" relations are:	3.24	3.30	3.25
4. In my business or organization, labor-management relations are:	3.12	3.10	2.92
5. For success in personnel management, my getting each person to do assigned duties to the best of his individual capability is:	3.06	3.20	3.17
6. Making employees aware of goals and objectives is:	2.76	2.90	3.17

*4 = Very Important; 3 = Important; 2 = Of Unknown Importance; 1 = Of Little Importance; and 0 = Of No Importance.

organizational goals and objectives were considered to be of greater importance by Agriculture Teachers than by Expert Managers. Customer and labor-management relations were viewed quite similarly by the Expert Managers and Agriculture Teachers. Without further study, interpretation of the differences identified is difficult. Do Expert Managers live by the philosophy implied by their relatively high rating of honesty and fair dealings, or was it easily recognizable as an item which should be rated high? Perhaps their rating of this item at the top of their value scale for dealing with others is a major contributing factor in their being identified as experts in management.

Does the comparatively low rating of "Relations with others outside my . . . organization" by Agriculture Teachers reflect an indifference on their part towards the general public? Whatever influences resulted in the differences between Expert Managers' and Agriculture Teachers' responses, need for further study is indicated if educational programs are to take into consideration the perceived importance of the individual items within the Human Relations area as reported.

Expert Managers vs. Professional Management Educators

The group differing significantly from Expert Managers in the largest number of areas were the Professional Management Educators. Their responses in three areas--Agricultural Mechanics, Management Participation, and Human Relations--differed from responses of Expert Managers.

Agricultural mechanics. Professional Management Educators' and Expert Managers' mean responses to items in the Agricultural Mechanics area are found in Table 19. The means for Professional Management Educators were lower than the Expert Managers' means on eleven of the twelve items under Agricultural Mechanics. The one item perceived to be of greater importance to the Professional Management Educators than Expert Managers was automated and/or mechanized systems and/or processes.

Management participation. Professional Management Educators' differed from Expert Managers' responses in the area of Management Participation as shown in Table 20. Although both groups' means on two items were very close to each other, there were differences in degree of importance placed upon two others. Expert Managers placed greater importance on listening to suggestions from others, without considering criticism as personal insult, than did the Professional Management Educators. Making decisions for people who prefer not to be involved in management was considered of greater importance to Expert Managers than Professional Management Educators. Both groups rated the latter item as of least importance of the four under Management Participation, however. The difference was evidently only in the degree of importance relative to other items being rated, rather than disagreement as to its relative position in the list of items in rank order.

Human relations. As in the case of Agriculture Teachers, Professional Management Educators' mean responses were significantly

Table 19. Mean Responses* of Expert Managers and Professional Management Educators on Agricultural Mechanics

Items within the Agricultural Mechanics area	Mean responses	
	Expert Managers	Professional Mgt. Educators
To perform my role in my business, or organization, knowledge and/or skill in:		
1. machinery and/or equipment is:	3.76*	2.75
2. tools used in the business is:	3.53	2.42
3. work simplification is:	3.29	3.25
4. automated and/or mechanized systems and/or processes is:	3.24	3.50
5. electrical distribution systems is:	3.12	1.50
6. building design and site planning and layout is:	3.00	2.75
7. sewer and/or waste disposal systems is:	2.94	2.33
8. water provision and/or distribution systems is:	2.88	2.08
9. construction of buildings and related structures is:	2.71	2.00
10. land layout and planning land improvements is:	2.59	2.58
11. internal combustion power and energy sources is:	2.59	1.42
12. other power and energy sources is:	1.71	0.75

*4 = Very Important; 3 = Important; 2 = Of Unknown Importance; 1 = Of Little Importance; and 0 = Of No Importance.

Table 20. Mean Responses* of Expert Managers and Professional Management Educators in Management Participation

Items within the Management Participation area	Mean responses	
	Expert Managers	Professional Mgt. Educators
1. Listening to suggestions of others, without considering criticism as personal insult is:	3.76*	3.25
2. The ability to recognize management situations requiring advice from others is:	3.53	3.50
3. Involving them in management to improve productivity of some people is:	3.06	3.08
4. Making decisions for people who prefer not to be involved in management is:	3.06	2.42

*4 = Very Important; 3 = Important; 2 = Of Unknown Importance; 1 = Of Little Importance; and 0 = Of No Importance.

different from those of Expert Managers in the area of Human Relations. Table 18 shows that the educators did not consider the influence of business ethics (honesty and fair dealings) on results of personal activity as important as did the Expert Managers. Two other items--relations with others, outside my business or organization, and labor-management relations within the business or organization--were both rated lower by the educators than by Expert Managers. The Professional Management Educators perceived two items--getting each person to do assigned duties to the best of his capability, and making employees aware of goals and objectives--to be of more importance than did the Expert Managers. "Customer" relations were rated nearly of equal importance by the educators and Expert Managers.

Expert Managers vs. Other Professional Workers

Size was the only area in which means of Other Professional Workers significantly differed from Expert Managers' means. However, on that one area there was nearly total disagreement, with the difference significant at the .01 level. Each of the four items were, as Table 21 indicates, rated lower in importance by the Other Professional Workers than Expert Managers. All ten Other Professional Workers were employed by large agribusinesses, or nation-wide organizations.

Implications of Significant Differences

The results found seem to indicate that size of the employing organization does not significantly influence the relative importance

Table 21. Mean Responses* of Expert Managers and Other Professional Workers in the Size Component Area

Items within the Size area	Mean responses	
	Expert Managers	Other Professional Workers
1. The influence of my organization's or business' size upon my personal involvement is:	3.12*	2.73
2. The influence of size on the success or failure of my business or organization is:	2.94	2.70
3. The influence of my personal needs on the size of my business is:	2.82	2.64
4. The influence of the nature of activities within the business or organization upon its size is:	2.70	2.62

*4 = Very Important; 3 = Important; 2 = Of Unknown Importance; 1 = Of Little Importance; and 0 = Of No Importance.

of other component areas within the management function, or agricultural technology areas, but does influence the importance of the items within the Size component area. This adds strength to the argument supporting the idea of mixing managers from many types of small, rural agribusinesses for purposes of securing adequate numbers to justify offering education in places too small to secure adequate enrollments from any one type of agribusiness. If managers of large, rural agribusinesses and workers employed by national organizations are not significantly different from Expert Managers of small, rural agribusinesses then perhaps managerial education for one group may meet the needs of others as well. In the one area--Size--individual differences should be able to be coped with, allowing the Other Professional Workers to join members of the other groups in most areas of education for management as it relates to small, rural agribusinesses. The above rationale, if applied to the one area in which Agriculture Teachers and Other Managers are each significantly different from Expert Managers, should make possible educational programs which meet needs of all individuals located in small, rural places, in the component areas covered in this study.

The only group significantly different from Expert Managers in more than one component area were the Professional Management Educators who were different in only three out of the seventeen areas. It was interesting to note that the two groups, from which Experts were selected to serve on a jury to help design the instrument, and establish the required concept and/or competency lists in each component area were shown to differ the most of any groups compared.

One group, being practitioners, and the other group being theorists undoubtedly had direct relationships to the differences established between the two groups.

Nothing in this study has been identified as proof of "right" or "wrong" responses. Each group was asked to give responses reflecting their own personal relationships to management of small, rural agribusinesses. Since no group was requested to give their interpretations of what some other person's role required, these findings cannot be interpreted in a way which implies that one group has perceived another groups' needs. Significant differences which appeared can only be used as a basis for consideration of alternatives in planning educational programs for the separate groups in those areas where they differ.

PERCEIVED IMPORTANCE OF FUTURE TRAINING

Mean responses from each of five different groups were computed, and used in testing for significant differences between Expert Managers and the other four groups. The items within each component area have been ranked according to the mean responses from Expert Managers, and may be found in Appendix G. Means of the other four groups were also shown for comparisons. They may be used as a basis for establishing priorities for specific items within each component area, when designing proposed future educational offerings. However, means have limited utility compared with percentages of responses falling within the upper two categories on the instrument used in information collection.

An illustration of the two systems for rank ordering items was selected to show the rationale for preferring the use of percentages of responses in the upper two categories over the use of means for ranking items. Table 22 provides information upon which two separate items were shown to have identical means of 2.23, yet decidedly different percentages of responses in the various categories. Item number four had 64.7 percent of respondents indicating that future training was considered to be "Important" or "Very Important." Item number nine, however, only had 52.9 percent of similar responses. Ranking these two items according to their means would place them at the same point in the list, while item four would be placed nearly 12 percentage points higher than item nine if ranked on percentages of responses falling in the two highest alternative response categories. Greater discrimination is possible in ranking items according to percentages of responses than by means.

Appendix H lists all items within each of the seventeen component areas, in rank order, based upon percentages of Expert Managers' responses which fall in the top two categories of "Important" and "Very Important."

SIGNIFICANT DIFFERENCES IN PERCEIVED IMPORTANCE OF FUTURE TRAINING

A one-way multivariate analysis of variance was used to determine significant differences between mean responses of Expert Managers versus the four other groups, as to their perceptions of degrees of importance of future training on each item for their personal success relative to management of small, rural agribusinesses.

Table 22. Comparison of Differences in Percents on Two Items With Identical Mean Responses

Response categories for two items	Numerical values	Frequency distributions	Percents
<u>Item No. 4</u>			
Very Important	4	2	11.76
Important	3	9	52.94
Of Unknown Importance	2	1	5.88
Of Little Importance	1	1	5.88
Of No Importance	0	4	25.52
Mean = 2.23			
<u>Item No. 9</u>			
Very Important	4	2	11.76
Important	3	7	41.17
Of Unknown Importance	2	4	23.52
Of Little Importance	1	1	5.88
Of No Importance	0	3	17.64
Mean = 2.23			

The results of this comparison are reported in Table 23. Differences were significant at the .05 level in only two comparisons. Professional Management Educators differed significantly from Expert Managers in the Planning component area. Other Professional Workers differed from Expert Managers in the area of Crops and Soils.

Expert Managers vs. Professional
Management Educators

Professional Management Educators placed significantly greater importance on future training in the area of Planning than did Expert Managers. Although there was not a great difference in relative ranking of items, the mean responses of Professional Management Educators were higher than those of Expert Managers for all eight items, as illustrated in Table 24. The lowest mean of the Professional Management Educators was higher than the highest mean for Expert Managers. Whether Expert Managers feel they have adequate competency in the area of Planning, or place less emphasis on it than do Professional Management Educators is not known. Expert Managers may take Planning for granted to the degree that a need for training for Planning is not recognized.

Expert Managers vs. Other
Professional Workers

Other Professional Workers differed from Expert Managers at the .05 level in their mean responses as to perceived importance of future training in the area of Crops and Soils. Comparisons of the means for the two groups are made in Table 25. Other Professional Workers indicated that future training on four items was of greater

Table 23. Significant Differences* in Importance of Future Training for Component Areas as Perceived by Expert Managers Compared With Four Other Groups

Component areas	Mean responses of Expert Managers vs.:			
	Other Managers	Agriculture Teachers	Prof. Mgt. Educ.	Other Prof. Workers
<u>Agriculture Technology</u>				
Agricultural Economics	.70	.94	.69	.81
Agricultural Mechanics	.50	.60	.32	.66
Crops and Soils	.13	.50	.62	.03*
Livestock Enterprises	.38	.58	.46	.53
<u>Management Function</u>				
Goals and Objectives	.72	.96	.43	.60
Planning	.66	.33	.04*	.73
Role Definition	.90	.56	.85	.48
Individual Differences	.28	.74	.20	.10
Control	.94	.63	.61	.48
Management Participation	.42	.86	.06	.20
Human Relations	.35	.47	.21	.62
Communications	.27	.59	.30	.44
Atmosphere	.35	.69	.32	.39
Size	.37	.99	.88	.67
Change	.23	.28	.33	.08
Standards	.80	.99	.95	.90
Evaluation	.32	.44	.85	.58

*Areas with differences at .05 level.

Table 24. Mean Responses* of Expert Managers and Professional Management Educators on Future Training in Planning

Future training in the Planning area	Mean responses	
	Expert Managers	Professional Mgt. Educators
1. Deciding whether or not results of past actions justify proposed future actions is:	1.94*	2.67
2. Setting goals and objectives as a part of planning is:	1.88	3.17
3. Deciding how resources (land, labor, materials and management) are to be organized or combined is:	1.82	3.17
4. Continuous (day-to-day) altering of plans to fit changing conditions is:	1.82	2.42
5. Policy making--specifying guides to decision making is:	1.76	3.08
6. Selecting (from alternate choices), the practices to be followed in daily operations is:	1.71	2.42
7. Planning by managerial personnel for the direction of all employees is:	1.65	2.18
8. Participation of all employees in making plans is:	1.24	2.67

*4 = Very Important; 3 = Important; 2 = Of Unknown Importance; 1 = Of Little Importance; and 0 = Of No Importance.

Table 25. Mean Responses* of Expert Managers and Other Professional Workers on Future Training in Crops and Soils

Future training in the area of Crops and Soils	Mean responses	
	Expert Managers	Other Professional Workers
In performing my role, knowledge and/or skill in:		
1. land use is:	2.35*	1.60
2. land capability is:	2.29	1.50
3. soil and water conservation management principles is:	2.18	2.20
4. crop production is:	2.12	2.20
5. erosion control structures and practices is:	2.12	1.75
6. drainage is:	1.82	1.00
7. land zoning is:	1.76	1.40
8. crop merchandising is:	1.59	1.50
9. crop transport is:	1.59	1.30
10. irrigation is:	1.53	1.10
11. crop storage is:	1.41	2.10
12. crop processing is:	1.35	2.10

*4 = Very Important; 3 = Important; 2 = Of Unknown Importance; 1 = Of Little Importance; and 0 = Of No Importance.

importance than did the Expert Managers. Those four items were: soil and water conservation management principles, crop production, crop storage, and crop processing. The Expert Managers perceived their future training to be more important than did the Other Professional Workers for eight items: land use, land capability, erosion control structures and practices, drainage, land zoning, crop merchandising, crop transport, and irrigation.

Programs planned for mutual consumption of the Expert Managers and Other Professional Workers in the area of Crops and Soils would have to be carefully geared to individual needs and interests. While the differences between the two groups' means appear to be slight on a few items, the groups probably would have to be handled separately on most items if perceived importance of future training was the only basis for offering educational programs for joint consumption.

There were no significant differences between Expert Managers and Other Managers, or Agriculture Teachers in means of responses on importance of future training in any of the seventeen component areas. None of the rural groups had significant differences at the .05 level on importance of future training in any of the Management Function component areas. Therefore, findings in this study tend to confirm or support the theory that in-service programs of education can be designed which are based upon the perceived importance of Expert Managers, which would also be suited to the other three rural groups--namely Other Managers, Agriculture Teachers, and Other Professional Workers. Conversely, programs planned for any of the other three would also be appropriate for Expert Managers. For

purposes of example of how findings may be used, if all items for which future training was perceived to be at least "important" for future success by 50 percent of any one of the rural groups were used as a basis for planning an in-service education program, that program would include the numbers of items from each component shown in Table 26. Ranked in descending order from the largest to smallest number of items included from each component area, Table 26 reveals a total of 74 Management Function Items (from a total of 82), and 22 Agriculture Technology Items from a total of 38. Thus, in this example 96 items would be included out of grand total of 120.

SUMMARY

The findings in this study were based upon perceptions of five groups who are directly involved either in teaching about, or utilizing Agriculture Technology and Management Function component areas. Seventeen areas, formerly identified as being required for success in their respective roles by a jury composed of Expert Managers and Expert Professional Management Educators, were the basis for this study. The component areas ranked in order of descending importance based upon mean percentages of Expert Managers' responses of "Very Important," and "Important" were: Communications, Goals and Objectives, Management Participation, Human Relations, Planning, Standards, Individual Differences, Role Definition, Evaluation, Size, Atmosphere, Agricultural Mechanics, Crops and Soils, Change, Control, Agricultural Economics, and Livestock Enterprises.

Table 26. Numbers of Items From Each Component Area Included in a Hypothetical Future Educational Program Based Upon 50 Percent or More Combined "Very Important" and "Important" Responses From Any of the Four Rural Groups of Respondents

Component areas	Numbers of items	
	Total in area	Suggested for inclusion in a hypothetical program
Management Function	Number	
Goals and Objectives	11	11
Evaluation	10	10
Planning	8	8
Control	8	8
Human Relations	6	6
Communications	5	5
Role Definition	5	5
Management Participation	4	4
Atmosphere	4	4
Change	8	5
Standards	6	4
Size	4	2
Individual Differences	3	2
Totals	82	74
Agriculture Technology	Number	
Agricultural Mechanics	12	9
Crops and Soils	12	9
Livestock Enterprises	9	2
Agricultural Economics	5	2
Totals	38	22

Individual items, totaled 120, of which 38 were in Agriculture Technology, and 82 were in the Management Function component areas. Items within each area were placed in rank order of means of Expert Managers' responses on a five-point scale. The scale used gave a value of 4 to "Very Important," 3 to "Important," 2 to "Of Unknown Importance," 1 to "Of Little Importance," and 0 to "Of No Importance" for success in relation to small, rural agribusiness management.

A one-way multivariate analysis of variance was used to test for significant differences in mean responses from Expert Managers versus Other Managers, Agriculture Teachers, Professional Management Educators, and Other Professional Workers. No significant differences were identified between any of the groups tested, on any of the seventeen component areas, except the following: Expert Managers were different (at the .05 level) from Other Managers in the Communications Area; Agriculture Teachers in Human Relations; Professional Management Educators in Human Relations, Management Participation, and Agricultural Mechanics; and Other Professional Workers in the Size area.

With provisions for handling individual differences, future preservice education programs based upon the Expert Managers' perceptions of relative importance of individual items should be able to meet most of the managerial education needs of people entering any of the fifteen types of small, rural agribusinesses; and/or teaching about the management of such agribusinesses.

Both means, and percentages of responses of Expert Managers in the "Very Important," and "Important" categories relative to

perceived importance of future training in all items were used to establish two lists of items in rank order. Benefits of using the list based upon percentages of top category responses, in preference to use of means were discussed.

Means were tested for significant differences on Expert Managers' perceptions of importance of future training in all component areas, compared with each of the other four groups'. Expert Managers' perceptions were found to be different from Professional Management Educators' in the area of Planning; and different from perceptions of Other Professional Workers' in Crops and Soils. In all fifteen of the remaining areas, comparisons of perceptions of all groups revealed no significant differences.

With provision for individual differences, which may exist within groups, an educational program planned to meet perceived needs of all rural groups studied can be based upon items ranked in order of relative importance as perceived by Expert Managers. Since the other rural groups did not differ significantly from Expert Managers, programs based upon perceptions of the other rural groups would also appear to meet the needs of Expert Managers.

CHAPTER V

SUMMARY, CONCLUSIONS, IMPLICATIONS, RECOMMENDATIONS, AND SUGGESTED FURTHER STUDY

SUMMARY

Introduction

The purpose of this study was to develop a rank-ordered list of required managerial and agricultural technology areas of concepts and/or competencies common to various types of small, rural agribusinesses; and needs for future training as perceived by individuals providing training for, or managing such businesses. This information was established as one basis for future education program planning of both preservice and in-service nature.

Over 90 percent of small business failures had been attributed to management errors by experts in business management. A review of literature failed to identify any list of requirements for success in training for, or managing small, rural agribusinesses. However, twelve elements or sensitivity areas within communications in management, and four broad categories of agricultural technology had been identified as needed for management of agribusinesses of various types.

Design and Methodology

Using the communications category as one sub-division, along with the other elements or sensitivity areas, to make up the

management function, along with the four agricultural technology areas involved in various agribusinesses, a search of literature was made to identify concept and/or competency items within each category. Since the term "sensitivity area" was found to be too restrictive to include many of the competencies in each area, a more general term--component area--was used as a basis for sorting items.

Each competency item deemed by various authors as being part of, or required for, success in management was placed in one of the categories, thus becoming part of a specific component area. The four agricultural technology areas were: Agricultural Economics, Agricultural Mechanics, Crops and Soils, and Livestock Enterprises. The thirteen management component areas were: Goals and Objectives, Planning, Role Definition, Individual Differences, Control, Management Participation, Human Relations, Communications, Atmosphere, Size, Change, Standards, and Evaluation.

Following initial exposure to a group of agricultural education graduate students, and a joint meeting of Agricultural Education State Department Consultants, and Michigan State University Agricultural Education faculty members, a proposal for research was approved for partial funding by the Michigan Department of Education.

An instrument was designed using the seventeen categories, under which specific items were placed. Two basic responses were requested for each item under each component area. People were asked to check the most appropriate response indicating their perception of how important each item was for their personal success in relation to small, rural agribusiness management. Secondly, they were asked

to indicate the degree of importance of their personal need for future training on each item. Alternative responses were valued at 4=Essential, 3=Very Important, 2=Important, 1=Of Little Importance, and 0=Of No Importance. Provision was made for suggestions for changes, prior to administration to a jury of experts. The jury consisted of two groups--managers of small, rural agribusinesses and Professional Management Educators. At least 50 percent of both groups agreed that items in each of the seventeen component areas were required for their personal success related to small, rural agribusiness management. Demographic information was called for on the instrument, which could be used to secure background information and help sort respondents into one of five separate groups.

The instrument was administered to people attending a series of group interview meetings held at different locations in Allegan and Branch counties. Those participating in this series of meetings were selected as potential expert managers. Each of three vocational agriculture teachers and the extension service director from both counties were asked to identify two other community leaders. The resulting twelve people were all asked to name and invite to meetings from one to three people perceived to be the most successful managers of the types of business managed within fifteen types of production, and/or supportive small, rural agribusinesses.

Each person attending one of the meetings was asked to complete the instrument, and where suitable, make suggestions for changing it to improve its clarity, completeness and accuracy.

Those who met all criteria for being considered Expert Managers were included in the jury of experts. Those in attendance who did not meet jury qualifications were used as a field test group similar to those ultimately included in the sample.

Simultaneous to administration of the instrument to the group meetings in the two counties, the same instrument was administered to people on the Michigan State University faculty, who held joint appointments as college and extension workers. These people were contacted by pre-arranged appointments at their offices, given instructions, and asked to complete the instrument for later collection.

Thirty-one Expert Managers and twelve Expert Professional Management Educators were identified and used in the above process. Their suggestions were noted, and considered, along with those of an advisory group of agricultural education graduate students. A final draft of the information collection instrument incorporated several refinements and alterations. One change was in the titles of categories of alternate responses. The top three response alternatives were changed from "Essential," "Very Important," and "Important" to "Very Important," "Important," and "Of Unknown Importance."

A total of 120 items, 38 of which were in Agricultural Technology, and 82 were in Management Function Component areas, were included in the seventeen areas on the instrument used. The final draft of the instrument (Appendix E), was administered to five groups of respondents. They were: Expert Managers, Other Managers, Agriculture Teachers, Professional Management Educators, and Other

Professional Workers--all of whom had roles related to small, rural agribusinesses.

Three procedures were utilized to collect information. First, potential participants were identified by agricultural leaders in Allegan and Branch counties. Each person identified, was invited by one of three vocational agriculture teachers in each county, to attend one of a series of group interview meetings. To secure at least one person in each of the five groups representing each of the fifteen types of agribusinesses, follow-up personal interviews were made. Two managers from each type of business were selected to contact. Each one contacted was asked to complete a form, following a briefing on the purpose and procedures to be followed. Some contacts were pre-arranged, while others were unannounced visits to the managers' places of business. Agriculture Teachers and Other Professional Workers were interviewed in the same manner as were managers. Professional Management Educators were personally contacted at their offices in either unannounced, or pre-arranged visits. After collected, information was transferred to key-punch cards, checked for accuracy, and analyzed electronically. Frequency distributions and percentages of responses were obtained.

Findings

The component areas were placed in rank order according to percentages of Expert Managers' responses falling within the top two response alternatives. The seventeen component areas ranked in order, from highest to lowest, were: (1) Communications, (2) Goals and Objectives, (3) Management Participation, (4) Human Relations, (5) Planning,

(6) Standards, (7) Individual Differences, (8) Role Definition, (9) Evaluation, (10) Size, (11) Atmosphere, (12) Agricultural Mechanics, (13) Crops and Soils, (14) Change, (15) Control, (16) Agricultural Economics, and (17) Livestock Enterprises.

The individual items within each area were also ranked according to mean responses of Expert Managers, and are shown in Appendix F. Comparable data for each item from all of the other four groups were shown for comparisons.

Significant differences between mean responses of Expert Managers and each of the other groups were identified by a one-way multivariate analysis of variance of mean responses. At the .05 level, Expert Managers differed from: Other Managers in the importance of Communications; Agriculture Teachers in Human Relations; Professional Management Educators in Agricultural Mechanics, Management Participation, and Human Relations; and Other Professional Workers in the Size Component area. Thus, of the four rural based groups, Expert Managers and the other three groups showed only three areas in which differences were significant. The only group differing from Expert Managers in more than one area were the Professional Management Educators, who were different in three of the seventeen areas.

Mean responses of each of the five groups of participants as to how important future training was perceived to be were computed on separate items, within each area. Items were ranked in order of mean responses of Expert Managers, and are shown in Appendix G, with means of the other four groups included for comparisons. If desired,

those rankings may be used as a basis for planning training for the future. However, means have less value as a basis for planning, compared with percentages of responses falling within the upper two alternates--"Very Important" and "Important." Percentages of these top two responses as to the degree of importance placed upon future training on each item were ranked within each component area according to the opinions of Expert Managers. Similar percentages of responses from the other groups were also reported. These findings were included as Appendix H.

One example cited to illustrate the differences between ranking on the basis of means, as compared with percentages of responses in the top two categories showed one item having 64.7 percent of the responses in the top two categories, while a different item with an identical mean--2.23--had only 52.9 percent of responses in the top two alternate categories. Ranked on the basis of means, these two items would have equal rank, yet nearly 12 percent more responses were "Very Important," or "Important" for one item than for the other item. This clearly shows that percentages are more discriminatory and, therefore, more accurate than means as a basis for ranking for future in-service educational program plans.

While means were not considered as beneficial as percentages upon which to base in-service program planning, they were useful in identifying differences between groups of respondents. Differences were significant at the .05 level in only two cases. Professional Management Educators differed from Expert Managers on importance of future training perceived to be needed in the area of Planning.

Other Professional Workers' perceptions differed from those of Expert Managers in the area of Crops and Soils. No significant differences were identified between Expert Managers and Other Managers, or Agriculture Teachers. Other Professional Workers were not found different from Expert Managers in their perceptions of importance of future training in any of the Management Function component areas.

For purposes of example, of how findings may be used, all items for which future training was perceived to be at least "important" for future success by 50 percent of any one of the rural groups were selected as a basis for planning a hypothetical in-service education program. That program would include 74 Management Function items (from a total of 82), and 22 Agricultural Technology items (from a total of 38). Thus, in this example, 96 items would be included from a total of 120 items.

CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

Despite differences in backgrounds, such as work and educational experiences, the Expert Managers and Professional Management Educators on the jury of Experts were in agreement that all seventeen component areas within agricultural technology and the management function are required for success in performing their respective roles relative to small, rural agribusiness management. Being unable to locate any more accurate measures of requirements for success, the conclusion was reached that the opinions of expert managers appear

to be a sound basis for planning future educational programs for upgrading small, rural agribusiness management.

Not only managers, but educators, and various levels of employees of small, rural agribusinesses require some agricultural technology and managerial competencies, or at least knowledge about certain concepts according to former studies and findings of this study. Most individuals who require managerial, and agricultural technological concepts and/or competencies, did not complete college, or in many cases even high school courses, in this subject. Those aspects of agribusiness management which are required for success have been obtained from some other types of training in the past. Most training was obtained through trial and error (on-the-job, self-taught), or from employers (in-service, on-the-job) as reported by respondents.

Experts in the field blame managerial errors for over 90 percent of small business failures. Other studies have implied or shown that management concepts are poorly or not understood by small, rural agribusiness managers. Both Federal and State policies call for provision of training or education required for entry into, and improvement in their chosen fields for all individuals. It is therefore recommended that both preservice and in-service managerial education based upon the seventeen component areas identified by the jury of experts in this study be made available to all persons who plan to be, or already are employed by small, rural agribusinesses in Michigan.

Agriculture Teachers, Professional Management Educators, and Other Professional Workers as well as Managers in this study indicated needs for both Agricultural Technology and Management Function component area items for success in their respective roles related to small, rural agribusiness. Other non-managerial agricultural workers in agribusinesses were found (in other research) to require managerial competencies. Few have received formal training in this field of study. Based upon these findings, it is recommended that courses should eventually be made available at the secondary (high school) level in the field of small, rural agribusiness management as one alternative elective for all rural high school students.

A shortage of teachers who are qualified to teach in this field was cited as a reason more courses have not been offered in Michigan in past years. The relatively few sources of former training identified by educators in this study as perceived to be helpful, either for management or teaching management of small, rural agribusinesses tends to support the statement that qualified teachers are not available in this field of study. Further, a majority of those Professional Management Educators involved in this study indicated a lack of adequate former training in management, and that future training in the field was important or required for their future success. It is therefore recommended that immediate steps be taken to establish goals, objectives and evaluation techniques, create plans for, and implement a recruitment program to secure expert managers of successful small, rural agribusinesses for an educational program having emphasis upon educational techniques, designed to

provide participants with qualifications for teacher certification.
This would be a means of quickly securing people who can assist in the development of future programs of education for others involved. It is further recommended that certification eligibility should include courses based upon the component areas identified as required for success both for educators of, and managers of small, rural agribusinesses.

Even expert managers, who have been prepared to meet teacher certification requirements, will not have been "field tested," or proven capable of successfully directing the learning by their students. Assuming they have proven their own capability as managers, and have been certified to teach, they will still have to be pioneers in developing successful educational programs.

Evidence was cited which indicated that educators and laymen working together develop better educational programs than does either group working alone. Use of citizens' advisory committees to help establish objectives, plans and evaluation for vocational education has been a successful practice for many years in many programs. Advisory committees are called for at both national and state levels, if local programs are to be eligible for reimbursement. It is therefore recommended that educational administrators and instructors utilize citizens' advisory committees to help establish programs of education for agribusiness management at all levels, from high school through graduate programs at university level. Such advisory groups should include experienced workers, managers, educators from other disciplines, current (and former students, where available) as well

as potential employers of enrollees. These types of individuals have been recognized as beneficial, not only in advisory capacity, but also as co-workers in providing educational experiences for students.

Respondents in this study verified a commonly held belief that actually doing a job is the best type of training (pp. 98-99). However, they also recognized that future formal education in both agricultural and management component areas are important to their future success relative to small, rural agribusiness management. Therefore, it is recommended that all educational programs designed to improve managerial competencies in small, rural agribusinesses should include actual work experience under supervision of those trained to guide, supervise and direct the learning experiences of trainees in managerial activities, including teachers of agriculture and other disciplines, as well as managers of businesses in which students receive training.

In addition to identifying areas of competencies required for success, some method was needed for setting priorities, and determining levels of need for various areas to be included in future educational offerings. The findings of this study showed that Expert Managers' opinions as to the relative importance of items within each component area were not significantly different from those of the other three rural based groups in more than one area each. Even the Professional Management Educators (despite their drastically different backgrounds, and relatively little work experience in small, rural agribusinesses) only differed from Expert Managers on three of the seventeen component areas. Since there were relatively few areas

where differences occurred between compared groups, and Expert Managers were recognized as being successful in their roles, it was concluded that the ranking of component areas, and items within each area in order of importance as perceived by Expert Managers is a suitable basis for establishing priorities or relative importance for preservice educational programs.

Both means of all responses of Expert Managers, and combined percentages of the top two alternative responses--"Very Important" and "Important"--were determined. Evidence was shown that, although ranking could be accomplished using means, the use of percentages of high alternative responses allowed greater discrimination and accuracy than means, as a basis for ranking. It was therefore concluded that while both means and percentages were reported, percentages were preferable to means as a basis for setting priorities for future educational program planning.

Based upon these two conclusions, it is recommended that priorities for preservice management educational programs be based upon percentages of the top two responses--"Important" and "Very Important"--by Expert Managers as to how important individual items within each of the component areas were perceived to be. These percentages can be found in the companion report by Meaders and Ferguson.

Taking into account the varied past educational and work histories as well as current employment status and other differences within groups, determination needed to be made as to whether or not one of these diverse groups differed from another in perceptions of importance of future education in the component areas studied. The

findings showed that only two groups differed significantly (on one component area in each case) from Expert Managers. Responses of Professional Management Educators differed from Expert Managers' on Planning. Other Professional Workers' responses on Crops and Soils differed from those of the Expert Managers. Other Managers and Agriculture Teachers did not differ from Expert Managers on any of the component areas.

Numbers of individuals within each group being relatively small, gave weaker support for generalizations than was desired at the outset of the study. However, the groups were composed of very carefully selected individuals deliberately chosen to provide as much diversity as possible within each group involved in education for, or management of a wide variety of small, rural agribusinesses. The vast majority of all respondents (regardless of other diversities) recognized common needs for future management training for their personal success. Similarities greatly outnumbered differences between perceptions of the five groups. From these findings it was concluded that where differences were not found, individuals from the various groups having similar perceptions of needs should be able to be grouped together for in-service educational programs based upon concept and/or competency areas recognized as required for success in performing roles related to small, rural agribusiness management.

In other words, if their personal perceptions of need for management training are similar, people involved with any and all types of small, rural agribusinesses may be mixed for training in the management function. Even if one individual sells crop production

supplies and another person processes livestock products, for example, they might both perceive a need for future training in evaluation techniques to apply in the management of their respective businesses.

Since there are relatively small numbers of any single type of business in a small, rural community, it is recommended that personnel from any and all types of small, rural agribusinesses be considered to be favorable prospects for in-service training programs on management. Potential, as well as current managers should be included.

To help assure continuous attendance and prolonged interest in educational programs, sociometric grouping of individuals who mutually indicate a desire to share participation in the program has been shown to be beneficial. Mutual perceptions of needs for specific educational program content appears to be common to a majority of respondents in this study, but in certain cases differences in perceptions of need for future management education were identified. However, the possibility exists that within any one community a group of individuals from many types of businesses have mutual perceptions of needs for managerial training and a desire to share that training with other specific individuals in the same community. Other situations, such as mutual needs for training combined with lack of desire to share in the same program with some other community residents may also be present.

It is recommended that a pre-test instrument be administered to potential enrollees, who not only identify their perceived needs for specific content, but also identify mutually desired participants

in proposed small, rural agribusiness management in-service educational programs. If such a practice was to be followed, it might prove to be an excellent means of recruiting enrollees, while simultaneously helping to identify the course content, and establish priorities for unique programs which would meet the needs of those participating. This could facilitate establishment of program goals, aid in planning, and offer guides to evaluation of proposed educational programs as well as aid in assuring continued participation by enrollees.

In addition to the above benefits, the procedure of pre-testing could help identify areas of differences within the potential participants. Thus, for example, a group of young relatively inexperienced employees, holding skilled jobs, and/or supervisory positions might share a desire to form one "class" or group. An older group of managers might form another group with mutual interests. Another situation might arise where mixed ages of individuals with mixed employment status might be found to hold similar perceptions of need and desire to share in yet another type of program. Since all individuals in a given community usually cannot be included in a program simultaneously, information such as discussed above would be a logical basis for selecting enrollees for each new "class" or group organized, with perhaps one new group being organized annually, or every two or three years, as needs dictate. Even within any one "class" or group, individual differences, once identified, could be dealt with on an individual, or small group basis, within the overall framework of the "class" activities.

In developing individualized learning programs, a matrix similar to the one developed by Yagi and others, as discussed in Chapter II, could be used to categorize the various concepts and/or competencies required at each level of functioning, across activity areas, and involving one of the three learning domains Yagi called individual characteristics--skills, knowledge, and attitudes. This three-dimensional matrix could aid in stratifying items within any of the seventeen component areas used in this study. Without changes in the Yagi matrix, it could apply to all levels of employment, and educational stratification.

One alternative approach would be to change the levels on the matrix from "levels of functioning," to "levels of employment" including such labels as: "Preservice," "Entry and Unskilled," "Skilled," "Supervisory," and "Managerial." The first alternative would lend itself more readily to in-service educational programs designed to include participants from different levels of employment than would the second alternative. The second alternative may have merit for establishing priorities for various concepts and/or competencies at different stages of employment for planning long-range future educational programs designed to gradually prepare people for career development throughout their lives.

Some degree of competency, or knowledge in the management function has been shown to be expected of entry level workers and others in non-managerial roles. Many individuals do not get involved in higher education. Therefore, the identification of specific concepts and/or competencies suited to various levels of

education appears to be called for in designing future management education programs. To accommodate this rationale, perhaps another alternate change in the matrix could include such levels as: "Elementary," "Secondary," "Post-Secondary," and "Adult Continuing" education levels.

The above discussion indicates a need for further study. Additional information is needed relative to the potential applications of findings of this study in educational program development.

SUGGESTED FURTHER STUDY

Due to the present lack of a proven theory of management for small, rural agribusinesses, further study is suggested to attempt to supplement, refine and test the findings of this study. In the initial stages of establishing future educational programs designed to improve small, rural agribusiness management, various approaches should be utilized, preferably under controlled research-oriented conditions, but at least on a trial and error basis, for evolving a workable approach to program development.

Based upon interpretations of the review of literature, and the results of procedures used and findings of this study, the following suggestions are made:

1. Identification of space intervals between items (and verification of rankings of items) should be determined for each component area, and between areas, by a follow-up study involving a state-wide sample, large enough to allow use of more accurate statistical treatments than were used in this study.

2. Various approaches to teacher education for future small, rural agribusiness management teachers should be developed and compared as to their relative effectiveness and efficiency in alleviating the current shortage of teachers in the field. At least two approaches should be considered. A group of carefully selected, presently certified agriculture teachers should be given in-service education covering the Management Function component areas. Presently, identifiable expert managers of small, rural agribusinesses should be given educational certification requirements, coupled with at least one course dealing with the Management Function component areas required for success related to teaching of, and/or management of small, rural agribusinesses. Following a reasonable trial period, the various teacher education methods should be evaluated.
3. To determine the influence of education about the Management Function upon manager performance, studies should be conducted which involve managers, their employees, and significant others in pre-tests, and post-tests associated with manager education based upon the required management component area concepts and/or competencies identified in this study.
4. Influences of factors such as age and past work and educational experiences upon perceptions of need for future training in the various aspects of the management function should be determined to aid in the selection of participants in educational programs.

5. Refinements should be made in the wording and alternate responses on any revisions of the instrument used for information collection in future studies similar to this study.

First, specific items should be uniformly worded in either general or specific, but not mixed terminology. For example, a general item as broad as "raising animals," probably should not be compared with a specific item such as "the influence of physical setting on atmosphere."

Another suggested change, which would reduce confusion for respondents would be to replace "Very Important," and "Important," with "Essential," and "Very Important" as the top two response alternatives on the information collection instrument.

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APPENDICES

APPENDIX A

**INTRODUCTORY LETTER TO EDUCATORS
IN BRANCH AND ALLEGAN COUNTIES**

APPENDIX A

INTRODUCTORY LETTER TO EDUCATORS IN BRANCH AND ALLEGAN COUNTIES

TO: Agribusiness and Natural Resource Educators
Allegan and Branch Counties

Gentlemen:

The trend to fewer and larger businesses in agriculture has been a matter of concern for many of the leadership groups in agricultural education in Michigan. The concern has focused, in part, on the extent to which the managers of agricultural businesses (such as farms; agricultural machinery sales and service; feed and fertilizer supplies; and marketing groups for grain, fruit and livestock) are provided with opportunities to up-date and modernize their management concepts.

The present project is one which deals with identification of management concepts which are essential for agribusinesses in rural areas, and the identification of the concepts for which managers of small agricultural businesses in rural areas believe they need additional help.

The project is being financed and conducted by Michigan State University in cooperation with the Michigan Department of Education. Staff members in the College of Education are working in cooperation with persons in the College of Agriculture and Natural Resources to implement the project, with special emphasis being given to case studies in Allegan and Branch Counties.

Your assistance on the project will be greatly appreciated. Mr. Gordon Ferguson, a research assistant on the project (and formerly a teacher of farm management to adult farmers in Minnesota), is conducting the field studies to determine:

1. Outstanding managers of agribusinesses,
2. Opinions of selected managers about importance of managerial concepts, and
3. Need for managerial instruction.

Sincerely

O. Donald Meaders, Professor
Coordinator of Agricultural Education

APPENDIX B

**SAMPLE OF INSTRUCTIONS TO COUNTY EDUCATORS
FOR IDENTIFYING POTENTIAL EXPERT MANAGERS
AND INVITING THEIR PARTICIPATION
IN THE STUDY**

APPENDIX B

SAMPLE OF INSTRUCTIONS TO COUNTY EDUCATORS FOR IDENTIFYING POTENTIAL EXPERT MANAGERS AND INVITING THEIR PARTICIPATION IN THE STUDY

TO: Branch County Agri-business and Natural Resource Educators

FROM: Gordon Ferguson

SUBJECT: Instructions and materials for providing lists of names, addresses, and phone numbers of "Agri-business jury of experts" candidates, and mailing invitation letters to those candidates.

Enclosed are six copies of the forms for identification of agri-business managers who are potential "experts" in managing their specific types of businesses. Will you please do the following?

- 1) Contact the president of your local chamber of commerce, and the one bank manager in your community who you believe is most knowledgeable about agri-business managers in your county.
- 2) Try to solicit these two individuals as assistants in identifying their selections of "expert" candidates.
- 3) Prepare and return one copy of your own list, keeping one copy to use in contacting those you identify.
- 4) Provide the banker and C. of C. president with 2 copies (each) of the forms for identifying "expert" candidates.
- 5) Ask them to return one copy of their list of identified "experts" to me, in the self-addressed envelope provided.
- 6) Sign and send the enclosed letters to the individuals you have identified as "experts" using the stamped envelopes attached. (Hold any unused stamped envelopes and I'll collect them for later use.)
- 7) Ask the banker, and C. of C. president to sign and mail the letters to those individuals they identify using envelopes provided.

APPENDIX C

SAMPLE INVITATION LETTER SENT TO POTENTIAL PARTICIPANT AGRIBUSINESS MANAGERS

APPENDIX C

SAMPLE INVITATION LETTER SENT TO POTENTIAL PARTICIPANT AGRIBUSINESS MANAGERS

Mr. John Doe
Route 3
Hamilton, Michigan

Dear Mr. Doe:

As a manager of an agricultural business, we would like to have an opportunity to get your opinions about WHAT IS IMPORTANT FOR SUCCESS IN MANAGEMENT OF AN AGRICULTURAL BUSINESS.

You have been suggested as a person whose opinions about management would be important to our research project. The project is under the joint sponsorship of the Michigan Department of Education, Michigan State University, and the local agricultural educators. The project, being conducted in Branch and Allegan counties, is attempting to pull together information about the nature of management concepts which may be needed by managers of agricultural business.

We would like to have you meet with us for a short time at one of the dates and places listed below to give us your opinions:

Place	Time	Day	Date
<u>Fenville</u> , M.S.U. Exp. Farm	10:00-11:30 a.m.	Thurs.	Feb. 18
<u>Hopkins</u> , Vo. Ag. Class Room	3:00-4:30 p.m.	Thurs.	Feb. 18
<u>Hamilton</u> , Vo. Ag. Class Room	7:30-9:00 p.m.	Thurs.	Feb. 18
<u>Allegan</u> , Griswald Auditorium	8:45-10:15 a.m.	Friday	Feb. 19
<u>Wayland</u> , Alften Bros. Implement Conf. Rm.	10:45-12:15 a.m.	Friday	Feb. 19

We will appreciate your assistance.

Sincerely,

Dr. O. D. Meaders
Coordinator of Agricultural Education
Michigan State University

Local Agricultural Leader

Title

Gordon E. Ferguson
Project Research Assistant
Michigan State University

Address

APPENDIX D

**SAMPLE LETTER TO COOPERATING COUNTY AGRICULTURAL
LEADERS REQUESTING ADDITIONAL NAMES OF
POTENTIAL PARTICIPANTS AND ARRANGEMENTS
FOR THE SECOND SERIES OF
GROUP INTERVIEW MEETINGS**

APPENDIX D

SAMPLE LETTER TO COOPERATING COUNTY AGRICULTURAL LEADERS REQUESTING ADDITIONAL NAMES OF POTENTIAL PARTICIPANTS AND ARRANGEMENTS FOR THE SECOND SERIES OF GROUP INTERVIEW MEETINGS

DATE: March 8, 1971

TO: Cooperating Agricultural Leaders
Branch and Allegan Counties

FROM: Gordon E. Ferguson, Agribusiness Management
Education Research Project

SUBJECT: (1) Identification of potential survey respondents
(2) Arrangements for group interviews of respondents

More agribusiness managers need to be identified and invited to participate in our agribusiness management education program development study. Will you please continue to assist in this work?

We have what appears to be a fairly good list of those who are above average managers in each of the areas in our study, with the following exceptions:

- (1) Forestry managers (tree farm, and related types of businesses producing forest products).
- (2) Some types of recreation units, (or at least individual managers names) haven't been identified specifically as a resort manager, golf course manager etc. (Some businesses have been identified, without the managers name.)
- (3) General supportive agribusinesses are not very diversified. For example, we do not have any lawyers, tax consultants, few insurance agents, and similar supportive managers identified. Can you add a few in these categories?

In addition to the more than 300 individuals you have very graciously identified as being above average, we now need the other half of the population--those who are perceived to be "below average." This group is a little more "sticky" to get at.

We have the following suggested procedure we are asking you to assist in:

We in no way want to have any one individual identified as a failure, or in any way threatened by being asked to participate--yet we want all types of managers included. We think this can be accomplished by including invitations to some newly identified "above average" managers in the above categories--lawyers, recreation, etc.--in the same lists of people, so that those considered to be "below average" aren't separated out from the rest. We will also invite those who did not attend one of the first series of meetings, to attend the second series, thus getting more of the "above average" group to join the "below average" group. Will you please list several poor managers or people you perceive to be near bankruptcy, or who must do something drastic to become "successful" by standards you use to measure success?

Please hold this list in confidence until I can arrange an appointment and get to talk to you personally. I'll try to see each of you sometime between March 12 and 19.

Due to delays in getting the "experts" (on and off campus), to respond, I have to delay the second series of meetings until after the state FFA convention. We should try to arrange a schedule of group interviews for the weeks of March 29 to April 9.

APPENDIX E

**SAMPLE OF THE FINAL DRAFT OF THE INSTRUMENT
USED TO OBTAIN RESPONSES FROM RESPONDENTS**

APPENDIX E

SAMPLE OF THE FINAL DRAFT OF THE INSTRUMENT
USED TO OBTAIN RESPONSES FROM RESPONDENTS

1971
Michigan State University
Agribusiness Managerial And Management Training Need Survey

I. PERSONAL INFORMATION

- (1) A. _____ Location B. Individual respondent No. _____ (2-4)
(leave blank)
Ignore all numbers in parenthesis in the margins.

Name: _____ Home Phone: _____
Office Phone: _____

Home Address: _____

- (5) C. Educator or Manager type: _____

Present Employer: _____

Business Address: _____
(if different from home)

D. EDUCATIONAL BACKGROUND

- (6) Elementary and secondary; Circle the last year completed:
0,K,1,2,3,4,5,6,7,8,9,10,11,12

Formal Post High School Training: (If none print "NONE")

	MAJOR	TYPE OF INSTITUTION	DEGREE OR RECOGNITION	PERIOD ATTENDED	
				From	To
(7-10)					
(11-14)				"	"
(15-18)				"	"
(19-22)					

List most helpful training received:

List any formal, or informal training including on-the-job, or other in-service training which has helped you for (1) performing agricultural business management duties; or if applicable (2) teacher training or teaching agribusiness managers. (Use back of page if needed)

	TYPE OF TRAINING IN AGRIBUS. MGT.	LENGTH OF TRAINING	INSTITUTION PRO- VIDING TRAINING	WHEN RECEIVED?		
				During past yr	2-5 yrs ago	over 5 yrs. ago
(23-26)						
(27-30)						
(31-34)						

I.D. No. _____

TYPE OF TRAINING FOR TEACHER TRAINING OR TEACHING AGRIBUSI- NESS MANAGEMENT	LENGTH OF TRAINING	INSTITUTION PROVIDING TRAINING	WHEN RECEIVED?		
			During past year	2-5 yrs ago	Over 5 yrs ago
(35-38)					
(39-42)					
(43-46)					

E. WORK-EXPERIENCE RECORD: Start with your present job and include all work periods for the four most recent jobs you have held.

EMPLOYERS' TYPE OF BUSI- NESS (identify ag. or non-ag relatedness)	BRIEFLY DESCRIBE MAJOR TYPES OF WORK PERFORMED, Describe ag. or non-ag. relatedness of duties, (not job titles).	TIME SPENT AT WORK			
		Place an x in proper columns for each job.			
Last job (present if now working)		0-6 mo.	6-12 mo.	1-3 yrs	over 3yrs
(47-49)					
Next most recent job					
(50-52)					
Next most recent job					
(53-55)					
Next most recent job					
(56-58)					

I.D. No. _____

TYPES OF BUSINESS

Please check the one(or two) Type(s) of business(es) yours most nearly fits into. If more than 40% of your business resources are used for a type, (such as dairy farm) check it. If two types each use 40% or more of your business resources, check two types. If no one type uses over 40% check "general production" or "general supportive agribusiness."

- | | | |
|--|--|------|
| (59-60) F. <u>PRODUCTION AGRIBUSINESS</u> | G. <u>SUPPORTIVE AGRIBUSINESS</u> | (61) |
| <input type="checkbox"/> Doesn't Apply | <input type="checkbox"/> Doesn't Apply | |
| <input type="checkbox"/> General Production Agribusiness | <input type="checkbox"/> General Supportive Agribusiness | |
| <input type="checkbox"/> Dairy Farm | <input type="checkbox"/> Crop Marketing Agribusiness | |
| <input type="checkbox"/> Cash Field Crop Farm | <input type="checkbox"/> Crop Production Materials and/or Service Supplier | |
| <input type="checkbox"/> Forestry Management | <input type="checkbox"/> Livestock Marketing Agribusiness | |
| <input type="checkbox"/> Meat Animal Farm | <input type="checkbox"/> Livestock Production Materials and/or Services Supplier | |
| <input type="checkbox"/> Nursery and/or greenhouse | | |
| <input type="checkbox"/> Orchard, Fruit and/or Nut Farm | | |
| <input type="checkbox"/> Poultry Farm | | |
| <input type="checkbox"/> Recreation Agribusiness | | |
| <input type="checkbox"/> Truck (vegetable) Crop Farm | | |

AGRIBUSINESS MANAGEMENT TEACHER
TRAINERS, AND EDUCATORS

If 25% or more of your time is allocated to education activities for agribusiness management, check the above types of business which you serve. Also identify yourself as an educator for those types by checking the appropriate items below or to the right.

- | | | |
|---|---|------|
| (63) I. <u>Level of Training Provided by me:</u> | H. <u>Type of Training provided by me:</u> | (62) |
| <input type="checkbox"/> Doesn't Apply | <input type="checkbox"/> Doesn't Apply | |
| <input type="checkbox"/> Agribusiness management for managers | <input type="checkbox"/> Production agribusiness management education | |
| <input type="checkbox"/> Agribusiness management for educators only | <input type="checkbox"/> Supportive agribusiness management education | |
| <input type="checkbox"/> Agribusiness management for both educators and managers. | <input type="checkbox"/> Both production and supportive types of management education | |
| | J. <u>Type of Employer I work for:</u> | (64) |
| | <input type="checkbox"/> Doesn't Apply | |
| | <input type="checkbox"/> I'm employed by a commercial firm only (include self employed) | |
| | <input type="checkbox"/> I'm employed by a non-profit agency or institution only | |
| | <input type="checkbox"/> I'm employed by both a commercial firm and a non-profit agency or institution. | |

I.D. No.: _____ K. Age: _____ L. Health _____ Excellent; _____ Good
 (65-66) _____ Fair; or _____ Poor (67)

M. EMPLOYMENT TOTALS

Record on each line, the total number of years you have been employed:

- (68-69) _____ in farming.
 (70-71) _____ in an agricultural related commercial business.
 (72-73) _____ in an ag. related, non-profit institution.
 (74-75) _____ in an ag. related government agency.

Card II

- (5-6) _____ in a non-ag. related commercial business
 (7-8) _____ in a non-ag. related, non-profit institution.
 (9-10) _____ in a non-ag. related government agency.
 (11-12) _____ as a self employed individual.
 (13-14) _____ as a farm manager.
 (15-16) _____ in medium or top level managers job (non farm)
 (17-18) _____ in a medium or top level managers job for present employer.

N. SELF EVALUATION

Using your own standards and measures of "success", how successful are you? (consider yourself in comparison with others having similar jobs. Also compare your own past performance with your ideals for complete success.) Check the most appropriate response to each item.

- In my personal life achievement, I'm usually:
 (19) _____ very successful; _____ successful; _____ unsuccessful; _____ very unsuccessful.
 In my role as _____, I'm usually:
 (20) _____ very successful; _____ successful; _____ unsuccessful; _____ very unsuccessful.

Now please record your opinions about each of the several concepts and/or areas of knowledge related to agribusiness management. First, determine how important you believe each item is for success in performing your duties as a _____. Record this opinion in the left hand set of columns. Next record in the right hand set of columns, your opinion as to how important you believe your need for future training is for each item.

I. D. No. _____

Mark the columns which best express your opinion, using this key: 4=very important 3=important 2=of unknown importance 1=of little importance 0=of no importance	For success in performing my duties as a _____									
	how important is:									
	each of the following?					my future training in each of the following?				

II. TECHNICAL AGRICULTURAL AREAS

A. <u>Agricultural Economics</u> is the social science concerned chiefly with the description and analysis of production, distribution, and consumption of agricultural goods and services within the over all structure of world-wide society.											
(21-22)	1. In performing my role in my business or organization, knowledge of world-wide effects of basic economic principles such as "laws" of supply and demand is:	4	3	2	1	0	4	3	2	1	0
(23-24)	2. Influence that government involvement in the production, distribution and consumption of goods and services has on my activity is:	4	3	2	1	0	4	3	2	1	0
(25-26)	3. The influence of social factors, (such as religious beliefs) upon the management of my type of business or organization is:	4	3	2	1	0	4	3	2	1	0
(27-28)	4. The influence of traditional, (or customary) cultural ideas of people, on the economic management of my business or organization is:	4	3	2	1	0	4	3	2	1	0
(29-30)	5. The influence of modern (relatively untried) cultural ideas of people upon the economic management of my business or organization is:	4	3	2	1	0	4	3	2	1	0
B. <u>Agricultural Mechanics</u> is the branch of physical science that deals with agricultural application of energy and forces, and their effects on bodies, in the design, construction, operation and maintenance of mechanical devices.											
To perform my role in my business, or organization, knowledge and/or skill in;											
(31-32)	1. work simplification is:	4	3	2	1	0	4	3	2	1	0
(33-34)	2. land layout and planning land improvements is:	4	3	2	1	0	4	3	2	1	0
(35-36)	3. building design and site planning and layout is:	4	3	2	1	0	4	3	2	1	0
(37-38)	4. construction of buildings and related structures is:	4	3	2	1	0	4	3	2	1	0
(39-40)	5. automated and/or mechanized systems and/or processes is:	4	3	2	1	0	4	3	2	1	0
(41-42)	6. machinery and/or equipment is:	4	3	2	1	0	4	3	2	1	0

<p>Mark the columns which best express your opinion, using this key:</p> <p>4=very important 3=important 2=of unknown importance 1=of little importance 0=of no importance</p>	<p>I. D. No. _____</p> <p>for success in performing my duties as a _____ how important is: _____</p> <p>each of the following? _____</p> <p>my future training in each of the following? _____</p>
--	--

Card III

D. Livestock enterprises include all types of animal life, regardless of the uses for which they are raised, including bees, fur bearing animals, as well as other domesticated and/or wildlife.

[illegible]

III. MANAGEMENT FUNCTION AREAS

A. Goals and Objectives are guides which furnish direction to activities, and influence decisions. (The ends, towards which effort is directed.)

(23-24)	1. Broad goals and objectives are:	4	3	2	1	0	4	3	2	1	0
(25-26)	2. Specific goals and objectives are:	4	3	2	1	0	4	3	2	1	0
(27-28)	3. Personal goals and objectives are:	4	3	2	1	0	4	3	2	1	0
(29-30)	4. Business or organizational goals and objectives are:	4	3	2	1	0	4	3	2	1	0
(31-32)	5. Long range goals and objectives are:	4	3	2	1	0	4	3	2	1	0
(33-34)	6. Short range goals and objectives are:	4	3	2	1	0	4	3	2	1	0
(35-36)	7. conditions within my organization or business which influence goal and objective setting are:	4	3	2	1	0	4	3	2	1	0
(37-38)	8. Conditions outside of my organization or business which influence goal and objective setting are:	4	3	2	1	0	4	3	2	1	0

I.D. No. _____

Mark the columns which best express your opinion, using this key: 4=very important 3=important 2=of unknown importance 1=of little importance 0=of no importance	For success in performing my duties as a _____									
	how important is:									
	each of the following?					my future training in each of the following?				

(39-40)	9. When a goal or objective is set, consideration given to how it relates to other goals and objectives is:	4	3	2	1	0	4	3	2	1	0
(41-42)	10. Which people are involved in establishing goals and objectives is:	4	3	2	1	0	4	3	2	1	0
(43-44)	11. To be able to measure the degree to which goals and objectives are being met is:	4	3	2	1	0	4	3	2	1	0

B. Planning is the creation of mental (sometimes expressed or written) programs of action, methods or means of achieving desired goals.

(45-46)	1. Setting goals and objectives as a part of planning is:	4	3	2	1	0	4	3	2	1	0
(47-48)	2. Planning by managerial personnel for the direction of all employees is:	4	3	2	1	0	4	3	2	1	0
(49-50)	3. Participation of all employees in making plans is:	4	3	2	1	0	4	3	2	1	0
(51-52)	4. Policy making - specifying guides to decision making is:	4	3	2	1	0	4	3	2	1	0
(53-54)	5. Deciding how resources (land, labor, materials and management) are to be organized or combined is:	4	3	2	1	0	4	3	2	1	0
(55-56)	6. Selecting (from alternate choices), the practices to be followed in daily operations is:	4	3	2	1	0	4	3	2	1	0
(57-58)	7. Continuous (day to day) altering of plans to fit changing conditions is:	4	3	2	1	0	4	3	2	1	0
(59-60)	8. Deciding whether or not results of past actions justify proposed future actions is:	4	3	2	1	0	4	3	2	1	0

C. Role definition is determining how each person relates to others, and what is expected of each individual within a group.

(61-62)	1. A managers' helping to determine what is expected of each individual in the business or organization is:	4	3	2	1	0	4	3	2	1	0
(63-64)	2. Making each persons' role clearly understood by everyone involved is:	4	3	2	1	0	4	3	2	1	0
(65-66)	3. Understanding the need to act differently when dealing with different groups or individuals is:	4	3	2	1	0	4	3	2	1	0
(67-68)	4. Understanding how to deal with the role conflict when one person's role disagrees with the role of another person is:	4	3	2	1	0	4	3	2	1	0
(69-70)	5. Fitting an individuals' role to personal traits as a means of reducing role conflict is:	4	3	2	1	0	4	3	2	1	0

I.D. No. _____

Mark the columns which best express your opinion, using this key: 4=very important 3=important 2=of unknown importance 1=of little importance 0=of no importance	For success in performing my duties as a _____									
	how important is:									
	each of the following?					my future training in each of the following?				

D. Individual differences refer to the unique traits of people, making every person unlike every other person.

(71-72)	1. Adjusting "jobs" to fit individuals is:	4	3	2	1	0	4	3	2	1	0
(73-74)	2. Risk due to inability to predict how individuals will behave under specific circumstances is:	4	3	2	1	0	4	3	2	1	0
(75-76)	3. Use of individual differences by a personnel manager to keep people "happily productive" is:	4	3	2	1	0	4	3	2	1	0

Card IV E. Control is the guidance, direction, regulation and coordination of activities of individuals within an organization.

(5-6)	1. Managerial control within the business or organization is:	4	3	2	1	0	4	3	2	1	0
(7-8)	2. Formal control (including stated policies and assignments of authority to specific individuals) is:	4	3	2	1	0	4	3	2	1	0
(9-10)	3. Informal control, (including unstated, but recognized policies; and assumed authority by various people) is:	4	3	2	1	0	4	3	2	1	0
(11-12)	4. Power (influence) in the hands of people other than the "managers" of the organization or business is:	4	3	2	1	0	4	3	2	1	0
(13-14)	5. The degree to which personal values are involved in control is:	4	3	2	1	0	4	3	2	1	0
(15-16)	6. The degree to which personal opinions are involved in control is:	4	3	2	1	0	4	3	2	1	0
(17-18)	7. The degree to which facts are involved in control is:	4	3	2	1	0	4	3	2	1	0
(19-20)	8. Scientific management (use of time and motion study, and work simplification methods) is:	4	3	2	1	0	4	3	2	1	0

F. Management Participation is the use of ideas and advice from laborers, and other employees, as well as "outside advisers" in policy and decision making.

(21-22)	1. The ability to recognize management situations requiring advice from others is:	4	3	2	1	0	4	3	2	1	0
(23-24)	2. Listening to suggestions of others, without considering criticism as personal insult is:	4	3	2	1	0	4	3	2	1	0
(25-26)	3. Involving them in management to improve productivity of some people is:	4	3	2	1	0	4	3	2	1	0
(27-28)	4. Making decisions for people who prefer not to be involved in management is:	4	3	2	1	0	4	3	2	1	0

I.D.No. _____

Mark the columns which best express your opinion, using this key: 4=very important 3=important 2=of unknown importance 1=of little importance 0=of no importance	For success in performing my duties as a _____									
	how important is:									
	each of the following?					my future training in each of the following?				

G. Human relations are dealings or mutual involvements with other people, as individuals or in groups.

(29-30)	1. In my business or organization, labor-management relations are:	4	3	2	1	0	4	3	2	1	0
(31-32)	2. For success in personnel management, my getting each person to do assigned duties to the best of his individual capability is:	4	3	2	1	0	4	3	2	1	0
(33-34)	3. Making employees aware of goals and objectives is:	4	3	2	1	0	4	3	2	1	0
(35-36)	4. "Customer" relations are:	4	3	2	1	0	4	3	2	1	0
(37-38)	5. Relations with others, outside my business or organization are:	4	3	2	1	0	4	3	2	1	0
(39-40)	6. The influence of business ethics (honesty and fair dealings) on results of my activity is:	4	3	2	1	0	4	3	2	1	0

H. Communications is the transfer of a message or some information from one person (the sender) to one or more others (the receiver)

(41-42)	1. Clear transfer of information is:	4	3	2	1	0	4	3	2	1	0
(43-44)	2. Transfer of detailed information is:	4	3	2	1	0	4	3	2	1	0
(45-46)	3. Accurate transfer of information is:	4	3	2	1	0	4	3	2	1	0
(47-48)	4. Two-way communications, both from the manager down, and from the laborers up to the manager is:	4	3	2	1	0	4	3	2	1	0
(49-50)	5. The many factors which can stop or change information before it reaches the intended receiver are:	4	3	2	1	0	4	3	2	1	0

I. Atmosphere (Climate) is the surrounding environment which influences individuals' attitudes.

(51-52)	1. The effect of atmosphere on workers' productivity is:	4	3	2	1	0	4	3	2	1	0
(53-54)	2. The influence of physical setting on atmosphere is:	4	3	2	1	0	4	3	2	1	0
(55-56)	3. The influence of material things worked with on atmosphere is:	4	3	2	1	0	4	3	2	1	0
(57-58)	4. The influence of relationships with people on atmosphere is:	4	3	2	1	0	4	3	2	1	0

I.D. No. _____

Mark the columns which best express your opinion, using this key: 4=very important 3=important 2=of unknown importance 1=of little importance 0=of no importance	For success in performing my duties as a _____									
	how important is:									
	each of the following?					my future training in each of the following?				

J. <u>Size</u> is the physical magnitude, extent, bulk, volume, or demensions of a business or organization.											
(59-60)	1. The influence of size on the success or failure of my business or organization is:	4	3	2	1	0	4	3	2	1	0
(61-62)	2. The influence of the nature of activities within the business or organization upon its size is:	4	3	2	1	0	4	3	2	1	0
(63-64)	3. The influence of my personal needs on the size of my business is:	4	3	2	1	0	4	3	2	1	0
(65-66)	4. The influence of my organization's or business' size upon my personal involvement is:	4	3	2	1	0	4	3	2	1	0

K. <u>To change</u> is to give a different position, direction or emphasis to some aspect of the business or organization, by shifting, altering or substituting one for another.											
(5-6)	1. To change an organization or business by adjusting organizational structure is:	4	3	2	1	0	4	3	2	1	0
(7-8)	2. To change an organization or business by adjusting technology or methods is:	4	3	2	1	0	4	3	2	1	0
(9-10)	3. To change an organization or business by adjusting people is:	4	3	2	1	0	4	3	2	1	0
(11-12)	4. Change based upon evaluation of facts is:	4	3	2	1	0	4	3	2	1	0
(13-14)	5. Change based upon personal opinion is:	4	3	2	1	0	4	3	2	1	0
(15-16)	6. Change which contributes to improved goal achievement is:	4	3	2	1	0	4	3	2	1	0
(17-18)	7. Change of goals and objectives, as conditions are altered is:	4	3	2	1	0	4	3	2	1	0
(19-20)	8. Change deliberately created, rather than as reaction to altered conditions is:	4	3	2	1	0	4	3	2	1	0

L. <u>Standards</u> are criterion, yardsticks, or models used to measure or evaluate (by comparison) what the business or organization should be.											
	1. Standards for measuring success of my type of business or organization found in;										
(21-22)	a. records of its past performance are:	4	3	2	1	0	4	3	2	1	0
(23-24)	b. what others have accomplished are:	4	3	2	1	0	4	3	2	1	0
(25-26)	c. ideals to be hoped for, are:	4	3	2	1	0	4	3	2	1	0

I.D. No. _____

Mark the columns which best express your opinion, using this key: 4=very important 3=important 2=of unknown importance 1=of little importance 0=of no importance	For success in performing my duties as a _____									
	how important is:									
	each of the following?					my future training in each of the following?				

(27-28)	2. Use of facts, gathered outside the firm or organization, as standards is:	4	3	2	1	0	4	3	2	1	0
(29-30)	3. Use of facts, gathered within the firm or organization as standards is:	4	3	2	1	0	4	3	2	1	0
(31-32)	4. Graphically comparing results achieved, with established standards is:	4	3	2	1	0	4	3	2	1	0

M. Evaluation is to examine and judge the value of a business or organization

(33-34)	1. Collection of information upon which judgment is made relative to the success of activity is:	4	3	2	1	0	4	3	2	1	0
(35-36)	2. The treatment of information, to improve its usefulness in evaluating activity is:	4	3	2	1	0	4	3	2	1	0
(37-38)	3. Analysis of findings, to clarify their meanings is:	4	3	2	1	0	4	3	2	1	0
(39-40)	4. Interpretation of information, as a basis for future recommendations is:	4	3	2	1	0	4	3	2	1	0
(41-42)	5. Selecting suitable methods of measuring success of my business or organization is:	4	3	2	1	0	4	3	2	1	0
(43-44)	6. Identifying the weak points in the business or organization is:	4	3	2	1	0	4	3	2	1	0
(45-46)	7. Identifying the strengths of the business or organization is:	4	3	2	1	0	4	3	2	1	0
(47-48)	8. For those who benefit from the activity of my business or organization to assist in its evaluation is:	4	3	2	1	0	4	3	2	1	0
(49-50)	9. For the process of business or organization evaluation to continue at all times is:	4	3	2	1	0	4	3	2	1	0
(51-52)	10. In evaluating the business or organization, securing information from many sources is:	4	3	2	1	0	4	3	2	1	0

APPENDIX F

**MEANS OF RESPONSES FROM FIVE AGRICULTURAL
GROUPS RELATIVE TO THE IMPORTANCE OF
CONCEPTS AND/OR COMPETENCIES IN
TECHNICAL AGRICULTURE AND
MANAGEMENT AREAS FOR THEIR
SUCCESS RELATIVE TO
MANAGEMENT OF SMALL,
RURAL AGRIBUSINESSES**

APPENDIX F

Table 27. Means of Responses* From Five Agricultural Groups Relative to the Importance of Concepts and/or Competencies in Technical Agriculture and Management Areas for Their Success Relative to Management of Small Rural Agribusinesses

I. TECHNICAL AGRICULTURE AREAS		Means of Responses* From:					
<u>A. Agricultural Economics</u> <u>Concepts and/or Competencies</u>		Expert Managers	Other Managers	Agri- culture Teachers	Profes- sional Mgt. Educators	Other Profes- sionals	Totals
Numbers of Respondents (n)		17	15	10	12	10	64
1.	Influence that government involvement in the production, distribution and consumption of goods and services has on my activity is:	3.12*	3.27	3.20	3.00	3.00	3.12
2.	In performing my role in my business or organization, knowledge of world-wide effects of basic economic principles such as "laws" of supply and demand is:	3.06	3.00	3.20	3.33	2.90	3.09
3.	The influence of modern (relatively untried) cultural ideas of people upon the economic management of my business or organization is:	2.35	1.87	2.50	2.83	2.20	2.32
4.	The influence of traditional, (or customary) cultural ideas of people, on the economic management of my business or organization is:	2.18	2.33	2.50	2.67	2.70	2.43
5.	The influence of social factors, (such as religious beliefs) upon the management of my type of business or organization is:	1.59	1.87	1.90	2.50	2.10	1.95
<u>B. Agricultural Mechanics</u> <u>Concepts and/or Competencies</u>							
To perform my role in my business, or organization, knowledge and/or skill in:							
1.	machinery and/or equipment is:	3.76*	3.53	3.20	2.75	2.80	3.28
2.	tools used in the business is:	3.53	3.40	3.00	2.42	2.50	3.04
3.	work simplification is:	3.29	3.47	3.20	3.25	3.20	3.29
4.	automated and/or mechanized systems and/or processes is:	3.24	2.60	3.40	3.50	2.50	3.04
5.	electrical distribution systems is:	3.12	2.13	3.10	1.50	1.90	2.39
6.	building design and site planning and layout is:	3.00	2.47	2.90	2.75	2.40	2.71
7.	sewer and/or waste disposal systems is:	2.94	1.80	3.50	2.33	2.20	2.53
8.	water provision and/or distribution systems is:	2.88	2.33	3.20	2.08	1.90	2.50
9.	construction of buildings and related structures is:	2.71	2.73	3.20	2.00	2.10	2.56
10.	land layout and planning land improvements is:	2.59	3.00	3.00	2.58	2.60	2.75
11.	internal combustion power and energy sources is:	2.59	2.13	3.00	1.42	1.70	2.18
12.	other power and energy sources is: (specify type) _____	1.71	1.60	1.80	0.75	1.20	1.53

*Means of responses were computed by applying numerical values to response alternatives:
 4 = Very Important; 3 = Important; 2 = Of Unknown Importance; 1 = Of Little Importance; and
 0 = Of No Importance.

Table 27 (continued)

I. TECHNICAL AGRICULTURE AREAS		Means of Responses* From:				
<u>C. Crops and Soils</u> <u>Concepts and/or Competencies</u>	Expert Mana- gers	Other Mana- gers	Agri- culture Teachers	Profes- sional Mgt. Educators	Other Profes- sionals	Totals
Numbers of Respondents (n)	17	15	10	12	10	64
In performing my role, knowledge and/or skill in:						
1. land uses is:	3.18*	2.93	3.50	2.42	2.60	2.93
2. land capability is:	3.12	3.00	3.70	2.58	2.50	2.98
3. crop production is:	3.06	3.40	3.40	2.83	3.30	3.18
4. soil and water conservation manage- ment principles is:	3.06	2.73	3.50	2.17	3.20	3.00
5. drainage is:	3.00	2.80	3.00	2.25	2.00	2.65
6. erosion control structures and practices is:	2.82	2.87	2.70	2.17	2.10	2.57
7. crop storage is:	2.47	3.00	3.00	2.75	3.10	3.09
8. crop merchandising is:	2.41	3.40	3.20	2.25	2.10	2.68
9. crop transport is:	2.29	2.80	2.40	2.33	1.80	2.35
10. land zoning is:	2.24	2.33	3.30	2.58	2.50	2.53
11. crop processing is:	2.18	3.13	2.30	1.83	2.60	2.46
12. irrigation is:	1.59	1.47	2.70	2.17	2.20	1.93
<u>D. Livestock Enterprises</u> <u>Concepts and/or Competencies</u>						
In performing my role in my business or organization knowledge and/or skill in:						
1. raising animals is:	2.24*	2.20	3.10	2.17	2.80	2.43
2. housing of livestock is:	2.06	2.07	2.70	2.58	2.30	2.29
3. livestock merchandising is:	1.53	1.87	3.00	2.33	1.00	1.90
4. livestock product merchandising is:	1.35	1.60	2.40	2.08	1.00	1.65
5. livestock transportation is:	1.29	1.33	2.30	1.75	1.00	1.50
6. livestock processing is:	1.29	1.20	2.00	1.75	1.10	1.43
7. storage of livestock products is:	1.24	1.40	2.70	1.92	1.50	1.67
8. livestock product processing is:	1.12	1.20	2.10	1.67	0.90	1.35
9. livestock product transportation is:	1.00	1.33	2.00	1.58	0.60	1.28
II. MANAGEMENT FUNCTION AREAS						
<u>A. Goals and Objectives</u> <u>Concepts and/or Competencies</u>						
1. To be able to measure the degree to which goals and objectives are being met is:	3.47*	3.33	2.70	3.25	3.50	3.28
2. When a goal or objective is set, consideration given to how it relates to other goals and objectives is:	3.41	2.87	2.80	3.17	3.20	3.15
3. Specific goals and objectives are:	3.35	3.60	3.10	3.58	3.60	3.45
4. Broad goals and objectives are:	3.35	3.33	3.30	3.58	3.70	3.43
5. Personal goals and objectives are:	3.35	3.27	3.50	3.67	3.20	3.39
6. Which people are involved in estab- lishing goals and objectives is:	3.29	2.73	2.30	3.17	2.50	2.85
7. Business or organizational goals and objectives are:	3.18	3.13	3.10	3.50	3.40	3.30
8. Long range goals and objectives are:	3.18	2.87	3.20	3.25	3.30	3.14
9. Conditions outside of my organ- ization or business which influence goal and objective setting are:	3.18	2.67	3.00	3.58	3.00	3.07
10. Conditions within my organization or business which influence goal and objective setting are:	2.94	3.13	2.70	3.41	3.30	3.09
11. Short range goals and objectives are:	2.94	2.73	2.90	3.33	3.30	3.01

* 4 = Very Important; 3 = Important; 2 = Of Unknown Importance; 1 = Of Little Importance; and 0 = Of No Importance.

Table 27 (continued)

II. MANAGEMENT FUNCTION AREAS		Means of Responses* From:					
<u>B. Planning Concepts and/or Competencies</u>		Expert Mana- gers	Other Mana- gers	Agri- culture Teachers	Profes- sional Mgt. Educators	Other Profes- sionals	Totals
Numbers of Respondents (n)		17	15	10	12	10	64
1.	Deciding how resources (land, labor, materials and management) are to be organized or combined is:	3.47*	3.53	2.70	3.50	3.20	3.32
2.	Deciding whether or not results of past actions justify proposed future actions is:	3.47	3.33	2.90	2.92	3.40	3.28
3.	Setting goals and objectives as a part of planning is:	3.35	3.53	3.40	3.50	3.80	3.50
4.	Selecting (from alternate choices), the practices to be followed in daily operations is:	3.18	3.33	3.00	2.59	3.20	3.07
5.	Continuous (day to day) altering of plans to fit changing conditions is:	3.12	3.33	3.00	2.92	3.40	3.15
6.	Policy making--specifying guides to decision making is:	3.06	3.13	2.60	3.25	2.70	2.93
7.	Planning by managerial personnel for the direction of all employees is:	3.06	2.47	3.10	3.17	3.30	2.98
8.	Participation of all employees in making plans is:	2.47	2.60	2.60	3.00	3.20	2.82
<u>C. Role Definition Concepts and/or Competencies</u>							
1.	Making each person's role clearly understood by everyone involved is:	3.29*	3.07	3.20	3.00	3.90	3.26
2.	A manager's helping to determine what is expected of each individual in the business or organization is:	3.29	2.87	3.00	3.00	3.40	3.10
3.	Understanding the need to act differently when dealing with different groups or individuals is:	3.24	3.27	2.90	3.58	3.80	3.34
4.	Understanding how to deal with the role conflict when one person's role disagrees with the role of another person is:	3.24	3.33	2.70	3.33	3.40	3.21
5.	Fitting an individual's role to personal traits as a means of reducing role conflict is:	3.00	2.73	2.70	3.25	3.10	2.95
<u>D. Individual Differences Concepts and/or Competencies</u>							
1.	Use of individual differences by a personnel manager to keep people "happily productive" is:	3.12*	3.13	3.30	3.00	3.30	3.15
2.	Adjusting "jobs" to fit individuals is:	3.00	3.07	3.00	3.00	3.30	3.06
3.	Risk due to inability to predict how individuals will behave under specific circumstances is:	2.76	2.40	2.60	2.58	2.40	2.56

* 4 = Very Important; 3 = Important; 2 = Of Unknown Importance; 1 = Of Little Importance; and 0 = Of No Importance.

Table 27 (continued)

II. MANAGEMENT FUNCTION AREAS		Means of Responses* From:					
E. Control Concepts and/or Competencies		Expert Managers	Other Managers	Agriculture Teachers	Professional Mgt. Educators	Other Professionals	Totals
Numbers of Respondents (n)		17	15	10	12	10	64
1.	Managerial control within the business or organization is:	3.41*	3.60	3.20	3.17	3.30	3.35
2.	Formal control (including stated policies and assignments of authority to specific individuals) is:	2.59	3.07	2.80	2.75	3.10	2.84
3.	Informal control, (including unstated, but recognized policies; and assumed authority by various people) is:	2.59	2.87	2.50	3.00	3.40	2.84
4.	Scientific management (use of time and motion study, and work simplification methods) is:	2.59	2.60	2.40	3.00	2.60	2.64
5.	The degree to which facts are involved in control is:	2.53	2.87	3.00	3.25	3.10	2.95
6.	The degree to which personal values are involved in control is:	2.53	2.87	2.40	2.75	3.20	2.73
7.	The degree to which personal opinions are involved in control is:	2.47	2.60	2.50	2.92	2.70	2.62
8.	Power (influence) in the hands of people other than the "managers" of the organization or business is:	2.29	2.40	3.00	2.92	2.90	2.68
F. Management Participation Concepts and/or Competencies							
1.	Listening to suggestions of others, without considering criticism as personal insult is:	3.76*	3.60	3.50	3.25	3.30	3.51
2.	The ability to recognize management situations requiring advice from others is:	3.53	3.53	3.40	3.50	3.00	3.42
3.	Involving them in management to improve productivity of some people is:	3.06	2.73	3.40	3.08	3.10	3.04
4.	Making decisions for people who prefer not to be involved in management is:	3.06	2.47	2.90	2.42	2.80	2.73
G. Human Relations Concepts and/or Competencies							
1.	The influence of business ethics (honesty and fair dealings) on results of my activity is:	3.88*	4.00	3.30	3.08	3.70	3.64
2.	Relations with others, outside my business or organization are:	3.53	3.33	2.50	2.92	3.70	3.23
3.	"Customer" relations are:	3.24	3.73	3.30	3.25	3.50	3.40
4.	In my business or organization, labor-management relations are:	3.12	3.67	3.10	2.92	3.10	3.20
5.	For success in personnel management, my getting each person to do assigned duties to the best of his individual capability is:	3.06	3.53	3.20	3.17	3.40	3.26
6.	Making employees aware of goals and objectives is:	2.76	3.13	2.90	3.17	3.30	3.07

* 4 = Very Important; 3 = Important; 2 = Of Unknown Importance; 1 = Of Little Importance; and 0 = Of No Importance.

Table 27 (continued)

II. MANAGEMENT FUNCTION AREAS		Means of Responses* From:					
H. Communications Concepts and/or Competencies		Expert Mana- gers	Other Mana- gers	Agri- culture Teachers	Profes- sional Mgt. Educators	Other Profes- sionals	Totals
Numbers of Respondents (n)		17	15	10	12	10	64
1. Accurate transfer of information is:		3.59*	3.80	3.50	3.50	4.00	3.67
2. Clear transfer of information is:		3.53	3.87	3.70	3.75	4.00	3.75
3. Transfer of detailed information is:		3.47	3.60	3.40	3.25	4.00	3.53
4. Two-way communications, both from the manager down, and from the laborers up to the manager is:		3.41	3.73	3.30	3.33	3.90	3.53
5. The many factors which can stop or change information before it reaches the intended receiver are:		3.41	2.87	3.30	3.00	3.40	3.18
I. Atmosphere Concepts and/or Competencies							
1. The effect of atmosphere on workers' productivity is:		3.18*	3.13	3.00	3.33	3.60	3.23
2. The influence of relationships with people on atmosphere is:		2.88	2.80	3.00	3.33	3.50	3.06
3. The influence of physical setting on atmosphere is:		2.76	2.93	3.10	3.08	3.30	3.00
4. The influence of material things worked with on atmosphere is:		2.47	2.66	3.00	2.75	3.40	2.79
J. Size Concepts and/or Competencies							
1. The influence of my organization's or business' size upon my personal involvement is:		3.12*	3.13	2.50	2.83	1.60	2.73
2. The influence of size on the success or failure of my business or organization is:		2.94	2.67	2.60	2.83	2.30	2.70
3. The influence of my personal needs on the size of my business is:		2.82	3.13	2.40	2.83	1.60	2.64
4. The influence of the nature of activities within the business or organization upon its size is:		2.70	2.93	2.30	2.83	2.10	2.62
K. Change Concepts and/or Competencies							
1. Change which contributes to improved goal achievement is:		3.24*	3.07	2.80	3.17	3.50	3.15
2. Change based upon evaluation of facts is:		3.12	2.60	2.40	3.58	3.20	3.03
3. Change of goals and objectives, as conditions are altered is:		3.00	2.73	2.80	3.17	3.10	2.95
4. To change an organization or business by adjusting technology or methods is:		2.94	2.53	2.70	3.50	3.00	2.92
5. To change an organization or business by adjusting organizational structure is:		2.59	1.80	2.30	3.00	2.80	2.46
6. To change an organization or business by adjusting people is:		2.41	2.00	2.60	3.33	2.90	2.59
7. Change based upon personal opinion is:		2.29	1.73	2.00	2.67	2.30	2.22
8. Change deliberately created, rather than as reaction to altered conditions is:		1.94	1.73	2.10	2.42	2.30	2.06

* 4 = Very Important; 3 = Important; 2 = Of Unknown Importance; 1 = Of Little Importance; and 0 = Of No Importance.

Table 27 (continued)

II. MANAGEMENT FUNCTION AREAS		Means of Responses* From:					
L. Standards Concepts and/or Competencies		Expert Managers	Other Managers	Agri- culture Teachers	Profes- sional Mgt. Educators	Other Profes- sionals	Totals
Numbers of Respondents (n)		17	15	10	12	10	64
1.	Standards for measuring success of my type of business or organization found in records of its past performance are:	3.47*	3.47	3.10	3.25	3.20	3.32
2.	Use of facts, gathered within the firm or organization as standards is:	3.35	3.27	2.80	3.33	3.50	3.26
3.	Standards for measuring success of my type of business or organization found in ideals to be hoped for, are:	3.18	3.13	3.20	3.00	3.10	3.12
4.	Graphically comparing results achieved, with established standards is:	3.00	2.27	2.30	2.75	2.80	2.64
5.	Use of facts, gathered outside the firm or organization, as standards is:	2.94	2.67	2.40	3.00	2.90	2.79
6.	Standards for measuring success of my type of business or organization found in what others have accomplished are:	2.82	2.60	2.90	3.00	2.50	2.76
M. Evaluation Concepts and/or Competencies							
1.	Identifying the weak points in the business or organization is:	3.24*	3.87	3.30	3.25	3.40	3.42
2.	Interpretation of information, as a basis for future recommendations is:	3.24	3.40	2.90	3.50	3.40	3.29
3.	In evaluating the business or organization, securing information from many sources is:	3.24	3.27	2.90	3.17	3.00	3.14
4.	Identifying the strengths of the business or organization is:	3.18	3.60	3.20	3.25	3.30	3.31
5.	The treatment of information, to improve its usefulness in evaluating activity is:	3.18	3.07	2.80	3.33	3.00	3.09
6.	Collection of information upon which judgment is made relative to the success of activity is:	3.12	3.33	2.90	3.58	3.10	3.21
7.	For the process of business or organization evaluation to continue at all times is:	3.06	2.87	3.10	3.17	3.30	3.07
8.	Analysis of findings, to clarify their meanings is:	2.94	3.00	2.80	3.42	3.20	3.06
9.	Selecting suitable methods of measuring success of my business or organization is:	2.82	2.87	2.90	2.92	2.90	2.87
10.	For those who benefit from the activity of my business or organization to assist in its evaluation is:	2.76	2.80	2.90	2.92	2.90	2.84

* 4 = Very Important; 3 = Important; 2 = Of Unknown Importance; 1 = Of Little Importance; 0 = Of No Importance.

APPENDIX G

**MEANS OF RESPONSES FROM FIVE AGRICULTURAL
GROUPS RELATIVE TO THE IMPORTANCE OF
FUTURE TRAINING IN CONCEPTS AND/OR
COMPETENCIES IN TECHNICAL AGRI-
CULTURE AND MANAGEMENT AREAS
FOR THEIR SUCCESS RELATIVE
TO MANAGEMENT OF SMALL,
RURAL AGRIBUSINESSES**

APPENDIX G

Table 28. Means of Responses* From Five Agricultural Groups Relative to the Importance of Future Training in Concepts and/or Competencies in Technical Agriculture and Management Areas for Their Success Relative to Management of Small, Rural Agribusinesses.

I. TECHNICAL AGRICULTURE AREAS		Means of Responses* From:					
<u>A. Agricultural Economics Concepts and/or Competencies</u>		Expert Mana-gers	Other Mana-gers	Agri-culture Teachers	Profes-sional Mgt. Educators	Other Profes-sionals	Totals
Numbers of Respondents (n)		17	15	10	12	10	64
1.	Influence that government involvement in the production, distribution and consumption of goods and services has on my activity is:	2.12*	2.47	2.40	2.42	2.10	2.29
2.	The influence of modern (relatively untried) cultural ideas of people upon the economic management of my business or organization is:	2.06	1.67	1.80	2.50	1.70	1.95
3.	In performing my role in my business or organization, knowledge of world-wide effects of basic economic principles such as "laws" of supply and demand is:	2.00	2.13	2.20	2.33	1.80	2.12
4.	The influence of traditional, (or customary) cultural ideas of people, on the economic management of my business or organization is:	1.47	1.60	1.60	2.00	1.50	1.62
5.	The influence of social factors, (such as religious beliefs) upon the management of my type of business or organization is:	1.06	1.33	1.20	1.92	1.40	1.35
<u>B. Agricultural Mechanics Concepts and/or Competencies</u>							
To perform my role in my business, or organization, knowledge and/or skill in:							
1.	machinery and/or equipment is:	2.82*	2.67	2.30	2.50	2.00	2.51
2.	work simplification is:	2.76	2.60	2.00	2.25	2.10	2.40
3.	automated and/or mechanized systems and/or processes is:	2.65	1.93	2.40	2.67	1.80	2.31
4.	building design and site planning and layout is:	2.53	2.13	2.20	2.33	1.60	2.20
5.	tools used in the business is:	2.29	2.67	2.20	2.00	1.80	2.23
6.	construction of buildings and related structures is:	2.29	2.20	2.20	1.75	1.60	2.04
7.	land layout and planning land improvements is:	2.12	2.53	2.20	2.08	1.70	2.15
8.	electrical distribution systems is:	2.06	1.73	2.10	1.25	1.40	1.73
9.	water provision and/or distribution systems is:	2.00	1.87	2.20	1.83	1.00	1.81
10.	sewer and/or waste disposal systems is:	1.94	1.53	2.60	2.25	1.20	1.89
11.	other power and energy sources is: (specify type)	1.71	1.33	1.40	0.58	0.80	1.27
12.	internal combustion power and energy sources is:	1.59	1.60	2.20	1.08	0.90	1.48

* Means of responses were computed by applying numerical values to response alternatives: 4 = Very Important; 3 = Important; 2 = Of Unknown Importance; 1 = Of Little Importance; and 0 = Of No Importance.

Table 28 (continued)

I. TECHNICAL AGRICULTURE AREAS		Means of Responses* From:					
<u>C. Crops and Soils</u> <u>Concepts and/or Competencies</u>		Expert Mana- gers	Other Mana- gers	Agri- culture Teachers	Profes- sional Mgt. Educators	Other Profes- sionals	Totals
Numbers of Respondents (n)		17	15	10	12	10	64
In performing my role, knowledge and/or skill in:							
1.	land uses is:	2.35*	2.07	2.30	2.17	1.60	2.12
2.	land capability is:	2.29	2.40	2.20	2.08	1.50	2.14
3.	soil and water conservation manage- ment principles is:	2.18	2.27	2.10	1.83	2.20	2.19
4.	crop production is:	2.12	2.73	2.60	2.50	2.20	2.42
5.	erosion control structures and practices is:	2.12	2.13	1.80	1.75	1.10	1.84
6.	drainage is:	1.82	1.93	2.20	1.75	1.00	1.76
7.	land zoning is:	1.76	1.87	2.80	2.33	1.40	2.00
8.	crop merchandising is:	1.59	2.93	2.50	1.92	1.50	2.09
9.	crop transport is:	1.59	1.73	1.90	2.08	1.30	1.71
10.	irrigation is:	1.53	1.00	2.10	2.00	1.10	1.51
11.	crop storage is:	1.41	2.13	2.40	2.33	2.10	2.01
12.	crop processing is:	1.35	2.27	1.80	1.58	2.10	1.82
<u>D. Livestock Enterprises</u> <u>Concepts and/or Competencies</u>							
In performing my role in my business or organization, knowledge and/or skill in:							
1.	raising animals is:	1.71*	1.87	2.20	2.00	2.00	1.92
2.	housing of livestock is:	1.59	1.80	2.00	2.33	1.50	1.82
3.	livestock merchandising is:	1.00	1.47	2.10	2.17	0.50	1.42
4.	livestock product merchandising is:	1.00	1.20	2.10	1.92	0.80	1.35
5.	livestock processing is:	1.00	1.07	1.80	1.50	0.50	1.15
6.	storage of livestock products is:	0.88	1.07	2.00	1.58	0.80	1.21
7.	livestock transportation is:	0.82	0.93	1.90	1.50	0.40	1.07
8.	livestock product transportation is:	0.65	1.27	1.70	1.33	0.20	1.01
9.	livestock product processing is:	0.65	0.93	1.80	1.42	0.50	1.01

* 4 = Very Important; 3 = Important; 2 = Of Unknown Importance; 1 = Of Little Importance; and 0 = Of No Importance.

Table 28 (continued)

II. MANAGEMENT FUNCTION AREAS		Means of Responses* From:					
<u>A. Goals and Objectives Concepts and/or Competencies</u>		Expert Managers	Other Managers	Agri- culture Teachers	Profes- sional Mgt. Educators	Other Profes- sionals	Totals
Numbers of Respondents (n)		17	15	10	12	10	64
1.	Short range goals and objectives are:	2.12*	2.47	2.20	2.92	2.40	2.40
2.	Business or organizational goals and objectives are:	2.12	2.20	2.20	3.00	2.40	2.35
3.	Conditions within my organization or business which influence goal and objective setting are:	2.12	2.33	2.30	2.83	2.30	2.35
4.	Specific goals and objectives are:	2.06	2.13	2.40	3.17	2.40	2.42
5.	Personal goals and objectives are:	2.06	2.27	2.30	3.16	2.30	2.39
6.	To be able to measure the degree to which goals and objectives are being met is:	2.00	2.40	2.20	2.83	2.60	2.37
7.	Long range goals and objectives are:	2.00	2.27	2.30	2.83	2.60	2.35
8.	Broad goals and objectives are:	1.88	2.33	2.40	3.25	2.50	2.42
9.	Which people are involved in establishing goals and objectives is:	1.88	1.93	2.10	2.75	1.80	2.07
10.	Conditions outside of my organization or business which influence goal and objective setting are:	1.88	2.07	2.40	3.08	2.30	2.29
11.	When a goal or objective is set, consideration given to how it relates to other goals and objectives is:	1.76	1.80	1.70	2.83	2.40	2.12
<u>B. Planning Concepts and/or Competencies</u>							
1.	Deciding whether or not results of past actions justify proposed future actions is:	1.94*	2.40	2.20	2.67	2.70	2.38
2.	Setting goals and objectives as a part of planning is:	1.88	2.53	2.00	3.17	2.50	2.39
3.	Deciding how resources (land, labor, materials and management) are to be organized or combined is:	1.82	2.07	2.40	3.17	2.40	2.31
4.	Continuous (day to day) altering of plans to fit changing conditions is:	1.82	2.00	2.10	2.42	2.50	2.12
5.	Policy making--specifying guides to decision making is:	1.76	2.20	2.50	3.08	2.30	2.31
6.	Selecting (from alternate choices), the practices to be followed in daily operations is:	1.71	2.40	2.50	2.42	2.20	2.20
7.	Planning by managerial personnel for the direction of all employees is:	1.65	1.80	2.50	2.92	2.50	2.18
8.	Participation of all employees in making plans is:	1.24	1.80	2.20	2.67	2.20	1.96

* 4 = Very Important; 3 = Important; 2 = Of Unknown Importance; 1 = Of Little Importance; and 0 = Of No Importance.

Table 28 (continued)

II. MANAGEMENT FUNCTION AREAS		Means of Responses* From:				
<u>C. Role Definition Concepts and/or Competencies</u>		Expert Man-agers	Other Man-agers	Agri-culture Teachers	Profes-sional Mgt. Educators	Other Profes-sionals
Numbers of Respondents (n)		17	15	10	12	10
		Totals				
		64				
1.	Understanding the need to act differently when dealing with different groups or individuals is:	2.41*	2.00	1.90	3.08	2.30
2.	Understanding how to deal with the role conflict when one person's role disagrees with the role of another person is:	2.35	2.33	2.20	3.00	2.00
3.	Making each persons' role clearly understood by everyone involved is:	2.18	2.00	2.40	2.67	2.50
4.	Fitting an individual's role to personal traits as a means of reducing role conflict is:	2.12	2.00	1.90	2.83	2.30
5.	A manager's helping to determine what is expected of each individual in the business or organization is:	2.06	1.93	2.30	2.58	2.60
<u>D. Individual Differences Concepts and/or Competencies</u>						
1.	Risk due to inability to predict how individuals will behave under specific circumstances is:	1.76*	1.60	2.00	2.25	1.60
2.	Use of individual differences by a personnel manager to keep people "happily productive" is:	1.65	2.13	2.10	2.67	2.30
3.	Adjusting "jobs" to fit individuals is:	1.59	1.93	2.20	2.67	2.40
<u>E. Control Concepts and/or Competencies</u>						
1.	Managerial control within the business or organization is:	2.12*	2.33	2.50	2.75	2.40
2.	Formal control (including stated policies and assignments of authority to specific individuals) is:	1.71	1.67	2.40	2.42	2.10
3.	Informal control (including unstated, but recognized policies; and assumed authority by various people) is:	1.65	1.53	1.80	2.75	2.70
4.	Scientific management (use of time and motion study, and work simplification methods) is:	1.59	1.87	2.00	2.50	2.20
5.	The degree to which personal values are involved in control is:	1.59	1.67	1.90	2.42	2.10
6.	The degree to which facts are involved in control is:	1.53	1.73	2.40	2.67	2.20
7.	The degree to which personal opinions are involved in control is:	1.41	1.67	1.90	2.42	2.10
8.	Power (influence) in the hands of people other than the "managers" of the organization or business is:	1.41	1.47	2.20	2.40	1.70

* 4 = Very Important; 3 = Important; 2 = Of Unknown Importance; 1 = Of Little Importance; and 0 = Of No Importance.

Table 28 (continued)

II. MANAGEMENT FUNCTION AREAS		Means of Responses* From:				
<u>F. Management Participation Concepts and/or Competencies</u>	Expert Managers	Other Managers	Agriculture Teachers	Professional Mgt. Educators	Other Professionals	Totals
Numbers of Respondents (n)	17	15	10	12	10	64
1. Listening to suggestions of others, without considering criticism as personal insult is:	2.00*	2.20	2.40	2.67	2.70	2.34
2. The ability to recognize management situations requiring advice from others is:	1.88	2.47	2.10	3.17	2.60	2.40
3. Involving them in management to improve productivity of some people is:	1.76	2.00	2.30	2.42	1.60	2.00
4. Making decisions for people who prefer not to be involved in management is:	1.76	1.67	2.10	2.00	1.70	1.82
<u>G. Human Relations Concepts and/or Competencies</u>						
1. The influence of business ethics (honesty and fair dealings) on results of my activity is:	2.18*	2.13	2.20	2.50	2.30	2.25
2. Relations with others, outside my business or organization are:	2.12	2.47	2.20	2.42	2.30	2.29
3. "Customer" relations are:	2.00	2.87	2.50	2.67	2.40	2.46
4. In my business or organization, labor-management relations are:	1.88	2.47	2.40	2.50	2.70	2.34
5. For success in personnel management, my getting each person to do assigned duties to the best of his individual capability is:	1.76	2.53	2.20	2.67	2.40	2.28
6. Making employees aware of goals and objectives is:	1.76	2.27	2.50	2.58	2.50	2.26
<u>H. Communications Concepts and/or Competencies</u>						
1. Clear transfer of information is:	1.88*	2.07	2.70	3.17	2.70	2.42
2. The many factors which can stop or change information before it reaches the intended receiver are:	1.82	2.13	2.70	2.67	2.60	2.31
3. Accurate transfer of information is:	1.82	1.87	2.40	2.92	2.90	2.29
4. Two-way communications, both from the manager down, and from the laborers up to the manager is:	1.76	2.13	2.30	3.00	2.90	2.38
5. Transfer of detailed information is:	1.76	2.13	2.40	2.83	2.70	2.29
<u>I. Atmosphere (Climate) Concepts and/or Competencies</u>						
1. The effect of atmosphere on workers' productivity is:	1.76*	2.00	2.20	2.50	1.70	2.01
2. The influence of relationships with people on atmosphere is:	1.71	2.20	1.90	2.67	2.30	2.12
3. The influence of material things worked with on atmosphere is:	1.53	2.27	2.10	2.33	2.00	2.01
4. The influence of physical setting on atmosphere is:	1.53	2.13	2.00	2.50	1.90	1.98

* 4 = Very Important; 3 = Important; 2 = Of Unknown Importance; 1 = Of Little Importance; and 0 = Of No Importance.

Table 28 (continued)

II. MANAGEMENT FUNCTION AREAS		Means of Responses* From:					
J. Size Concepts and/or Competencies		Expert Mana- gers	Other Mana- gers	Agri- culture Teachers	Profes- sional Mgt. Educators	Other Profes- sionals	Totals
Numbers of Respondents (n)		17	15	10	12	10	64
1.	The influence of the nature of activities within the business or organization upon its size is:	1.88*	2.47	1.90	2.33	1.30	2.01
2.	The influence of my personal needs on the size of my business is:	1.88	2.07	1.90	2.42	1.30	1.93
3.	The influence of my organization's or business' size upon my personal involvement is:	1.82	2.27	1.80	2.33	1.30	1.93
4.	The influence of size on the success or failure of my business or organization is:	1.82	2.06	1.70	2.33	1.60	1.92
K. Change Concepts and/or Competencies							
1.	Change based upon evaluation of facts is:	2.00*	2.13	1.90	2.92	2.40	2.28
2.	Change which contributes to improved goal achievement is:	1.76	2.47	2.40	2.67	2.70	2.34
3.	To change an organization or business by adjusting technology or methods is:	1.76	2.13	2.10	3.00	2.10	2.18
4.	Change of goals and objectives, as conditions are altered is:	1.65	2.53	2.20	2.75	2.30	2.25
5.	Change based upon personal opinion is:	1.53	1.53	1.90	2.25	1.60	1.73
6.	To change an organization or business by adjusting organizational structure is:	1.41	1.60	1.70	2.58	2.30	1.85
7.	To change an organization or business by adjusting people is:	1.35	1.73	2.20	2.83	2.40	2.01
8.	Change deliberately created, rather than as reaction to altered conditions is:	1.29	1.40	1.80	2.08	2.00	1.65
L. Standards Concepts and/or Competencies							
1.	Use of facts, gathered within the firm or organization as standards is:	2.29*	2.47	2.40	2.75	2.30	2.43
2.	Use of facts, gathered outside the firm or organization, as standards is:	2.29	2.00	2.20	2.67	1.90	2.21
3.	Standards for measuring success of my type of business or organization found in records of its past performance are:	2.12	2.40	2.10	2.67	2.10	2.31
4.	Standards for measuring success of my type of business or organization found in ideals to be hoped for, are:	2.06	2.20	1.90	2.33	2.10	2.15
5.	Graphically comparing results achieved, with established standards is:	2.00	1.87	1.90	2.17	2.00	1.89
6.	Standards for measuring success of my type of business or organization found in what others have accomplished are:	1.94	2.00	1.90	2.33	1.70	2.01

* 4 = Very Important; 3 = Important; 2 = Of Unknown Importance; 1 = Of Little Importance; and 0 = Of No Importance.

Table 28 (continued)

II. MANAGEMENT FUNCTION AREAS		Means of Responses* From:					
<u>M. Evaluation Concepts and/or Competencies</u>		Expert Man- agers	Other Man- agers	Agri- culture Teachers	Profes- sional Mgt. Educators	Other Profes- sionals	Totals
Numbers of Respondents (n)		17	15	10	12	10	64
1.	Identifying the weak points in the business or organization is:	2.34*	2.87	2.70	2.75	2.40	2.57
2.	In evaluating the business or organization, securing information from many sources is:	2.29	2.47	2.50	2.50	2.20	2.39
3.	Interpretation of information, as a basis for future recommendations is:	2.24	2.53	2.30	2.75	2.70	2.48
4.	For the process of business or organization evaluation to continue at all times is:	2.24	2.07	2.60	2.58	2.70	2.39
5.	Selecting suitable methods of measuring success of my business or organization is:	2.16	2.40	2.60	2.50	2.60	2.40
6.	Identifying the strengths of the business or organization is:	2.12	2.47	2.60	2.83	2.40	2.45
7.	Collection of information upon which judgment is made relative to the success of activity is:	2.12	2.53	2.10	2.75	2.20	2.38
8.	The treatment of information, to improve its usefulness in evaluating activity is:	2.06	2.27	2.40	2.42	2.50	2.29
9.	Analysis of findings, to clarify their meanings is:	1.94	2.27	2.40	2.67	2.50	2.31
10.	For those who benefit from the activity of my business or organization to assist in its evaluation is:	1.88	1.93	2.60	2.25	2.50	2.17

* 4 = Very Important; 3 = Important; 2 = Of Unknown Importance; 1 = Of Little Importance; and 0 = Of No Importance.

APPENDIX H

**PERCENTAGES OF "IMPORTANT" OR "VERY IMPORTANT"
RESPONSES FROM FIVE AGRICULTURAL GROUPS
RELATIVE TO THE IMPORTANCE OF FUTURE
TRAINING IN CONCEPTS AND/OR
COMPETENCIES IN TECHNICAL
AGRICULTURE AND MANAGE-
MENT AREAS FOR THEIR
SUCCESS RELATIVE TO
MANAGEMENT OF SMALL,
RURAL AGRIBUSINESSES**

APPENDIX H

Table 29. Percentages of "Important" or "Very Important" Responses* From Five Agricultural Groups Relative to the Importance of Future Training in Concepts and/or Competencies in Technical Agriculture and Management Areas for Their Success Relative to Management of Small, Rural, Agribusinesses

I. TECHNICAL AGRICULTURE AREAS		Percentages of "Important" or "Very Important" Responses From:				
<u>A. Agricultural Economics</u> <u>Concepts and/or Competencies</u>		Expert Man- agers	Other Man- agers	Agri- culture Teachers	Profes- sional Mgt. Educators	Other Profes- sionals
Numbers of Respondents (n)		17	15	10	12	10
1.	In performing my role in my business or organization, knowledge of world-wide effects of basic economic principles such as "laws" of supply and demand is:	53.0*	46.7	60.0	50.0	30.0
2.	Influence that government involvement in the production, distribution and consumption of goods and services has on my activity is:	41.1	60.0	60.0	58.3	50.0
3.	The influence of modern (relatively untried) cultural ideas of people upon the economic management of my business or organization is:	35.3	26.6	30.0	50.0	30.0
4.	The influence of traditional (or customary) cultural ideas of people, on the economic management of my business or organization is:	17.6	26.7	20.0	41.7	30.0
5.	The influence of social factors (such as religious beliefs) upon the management of my type of business or organization is:	17.6	20.0	10.0	41.7	30.0
<u>B. Agricultural Mechanics</u> <u>Concepts and/or Competencies</u>						
To perform my role in my business, or organization, knowledge and/or skill in:						
1.	machinery and/or equipment is:	76.5*	66.7	50.0	58.4	50.0
2.	work simplification is:	70.6	60.0	40.0	58.4	50.0
3.	building design and site planning and layout is:	64.7	53.3	50.0	33.3	30.0
4.	automated and/or mechanized systems and/or processes is:	58.8	46.6	60.0	66.7	30.0
5.	construction of buildings and related structures is:	58.8	53.3	50.0	25.0	30.0
6.	tools used in the business is:	52.9	66.6	50.0	41.7	40.0
7.	land layout and planning land improvements is:	47.0	60.0	50.0	41.7	30.0
8.	water provision and/or distribution systems is:	35.2	33.3	50.0	33.3	20.0
9.	sewer and/or waste disposal systems is:	41.1	33.3	60.0	41.6	20.0
10.	electrical distribution systems is:	41.1	33.3	40.0	25.0	30.0
11.	internal combustion power and energy sources is:	39.4	33.4	40.0	16.6	20.0
12.	other power and energy sources is: (specify type)_____	11.8	6.7	0.0	0.0	10.0

* Percentages of Important and Very Important Responses were added together as a basis for rank ordering individual items within each area, as perceived by the Expert Managers.

Table 29 (continued)

I. TECHNICAL AGRICULTURE AREAS		Percentages of "Important" or "Very Important" Responses From:				
<u>C. Crops and Soils Concepts and/or Competencies</u>		Expert Managers	Other Managers	Agri-culture Teachers	Profes-sional Mgt. Educators	Other Profes-sionals
Numbers of Respondents (n)		17	15	10	12	10
In performing my role, knowledge and/or skill in:						
1.	crop production is:	58.8*	73.3	80.0	58.4	60.0
2.	land uses is:	58.8	46.7	60.0	50.0	20.0
3.	land capability is:	58.8	60.0	40.0	33.4	20.0
4.	soil and water conservation management principles is:	52.9	53.4	40.0	25.0	50.0
	erosion control structures and practices is:	46.0	40.0	20.0	25.0	10.0
6.	crop transport is:	41.2	40.0	30.0	50.0	30.0
7.	land zoning is:	35.3	40.0	80.0	41.7	20.0
8.	drainage is:	35.3	33.3	50.0	33.4	10.0
9.	crop merchandising is:	35.3	80.0	60.0	41.7	40.0
10.	crop storage is:	29.4	46.7	70.0	58.3	50.0
11.	irrigation is:	29.0	20.0	40.0	33.3	10.0
12.	crop processing is:	29.4	46.7	30.0	25.0	50.0
<u>D. Livestock Enterprises Concepts and/or Competencies</u>						
In performing my role in my business or organization knowledge and/or skill in:						
1.	raising animals is:	41.1*	53.3	50.0	33.3	50.0
2.	housing of livestock is:	40.2	46.7	40.0	50.0	40.0
3.	livestock merchandising is:	17.7	40.0	50.0	41.7	10.0
4.	livestock product merchandising is:	17.7	36.6	40.0	33.3	20.0
5.	storage of livestock products is:	11.8	26.7	40.0	33.3	10.0
6.	livestock processing is:	11.8	20.0	40.0	25.0	10.0
7.	livestock transportation is:	11.8	20.0	40.0	33.3	0.0
8.	livestock product transportation is:	11.8	26.7	30.0	25.0	0.0
9.	livestock product processing is:	5.9	20.0	40.0	33.3	10.0
II. MANAGEMENT FUNCTION AREAS						
<u>A. Goals and Objectives Concepts and/or Competencies</u>						
1.	Specific goals and objectives are:	52.9*	53.3	60.0	83.3	70.0
2.	Personal goals and objectives are:	52.9	53.3	50.0	83.3	60.0
3.	Conditions within my organization or business which influence goal and objective setting are:	52.9	53.3	50.0	50.0	40.0
4.	Broad goals and objectives are:	47.0	60.0	60.0	75.0	70.0
5.	To be able to measure the degree to which goals and objectives are being met is:	47.0	60.0	50.0	66.7	60.0
6.	When a goal or objective is set, consideration given to how it relates to other goals and objectives is:	47.1	46.6	30.0	50.0	70.0
7.	Short range goals and objectives are:	47.0	60.0	34.0	58.4	50.0
8.	Conditions outside of my organization or business which influence goal and objective setting are:	41.1	46.6	50.0	66.7	60.0
9.	Long range goals and objectives are:	41.1	46.6	50.0	58.3	50.0
10.	Which people are involved in establishing goals and objectives is:	41.1	40.0	50.0	50.0	30.0
11.	Business or organizational goals and objectives are:	38.8	53.4	40.0	66.7	60.0

* Percentages of Important and Very Important Responses were added together as a basis for rank ordering individual items within each area, as perceived by the Expert Managers.

Table 29 (continued)

II. MANAGEMENT FUNCTION AREAS		Percentages of "Important" or "Very Important" Responses From:				
<u>B. Planning Concepts and/or Competencies</u>		Expert Managers	Other Managers	Agri-culture Teachers	Profes-sional Mgt. Educators	Other Profes-sionals
Numbers of Respondents (n)		17	15	10	12	10
1.	Deciding how resources (land, labor, materials and management) are to be organized or combined is:	52.9*	46.7	70.0	75.0	60.0
2.	Selecting (from alternate choices), the practices to be followed in daily operations is:	47.1	66.7	70.0	50.0	60.0
3.	Setting goals and objectives as a part of planning is:	41.1	66.7	40.0	83.3	60.0
4.	Deciding whether or not results of past actions justify proposed future actions is:	41.1	60.0	60.0	58.3	80.0
5.	Continuous (day to day) altering of plans to fit changing conditions is:	41.1	53.4	40.0	41.7	60.0
6.	Planning by managerial personnel for the direction of all employees is:	35.3	46.7	60.0	75.0	60.0
7.	Policy making--specifying guides to decision making is:	29.4	53.3	70.0	75.0	50.0
8.	Participation of all employees in making plans is:	23.5	33.3	50.0	58.4	50.0
<u>C. Role Definition Concepts and/or Competencies</u>						
1.	Understanding how to deal with the role conflict when one person's role disagrees with the role of another person is:	52.9*	60.0	50.0	58.3	50.0
2.	Understanding the need to act differently when dealing with different groups or individuals is:	47.1	40.0	30.0	66.7	60.0
3.	Making each person's role clearly understood by everyone involved is:	47.0	40.0	70.0	58.3	50.0
4.	A manager's helping to determine what is expected of each individual in the business or organization is:	41.1	46.7	70.0	50.0	60.0
5.	Fitting an individual's role to personal traits as a means of reducing role conflict is:	41.1	46.7	30.0	58.3	50.0
<u>D. Individual Differences Concepts and/or Competencies</u>						
1.	Risk due to inability to predict how individuals will behave under specific circumstances is:	35.3*	33.3	40.0	50.0	30.0
2.	Adjusting "jobs" to fit individuals is:	29.4	40.0	60.0	58.3	70.0
3.	Use of individual differences by a personnel manager to keep people "happily productive" is:	29.4	46.7	50.0	58.3	50.0

* Percentages of Important and Very Important Responses were added together as a basis for rank ordering of individual items within each area, as perceived by the Expert Managers.

Table 29 (continued)

II. MANAGEMENT FUNCTION AREAS		Percentages of "Important" or "Very Important" Responses From:				
<u>E. Control Concepts and/or Competencies</u>		Expert Managers	Other Managers	Agriculture Teachers	Professional Mgt. Educators	Other Professionals
Numbers of Respondents (n)		17	15	10	12	10
1.	Managerial control within the business or organization is:	47.0*	46.7	80.0	58.4	50.0
2.	Formal control (including stated policies and assignments of authority to specific individuals) is:	35.3	33.3	70.0	41.7	50.0
3.	Informal control (including unstated, but recognized policies; and assumed authority by various people) is:	35.3	26.7	20.0	58.4	60.0
4.	The degree to which facts are involved in control is:	29.4	33.3	70.0	75.0	60.0
5.	Scientific management (use of time and motion study, and work simplification methods) is:	29.4	40.0	50.0	58.3	50.0
6.	The degree to which personal values are involved in control is:	29.4	33.3	30.0	58.4	50.0
7.	The degree to which personal opinions are involved in control is:	29.4	20.0	30.0	50.0	50.0
8.	Power (influence) in the hands of people other than the "managers" of the organization or business is:	17.7	20.0	60.0	58.3	30.0
<u>F. Management Participation Concepts and/or Competencies</u>						
1.	The ability to recognize management situations requiring advice from others is:	41.2*	66.6	40.0	75.0	70.0
2.	Listening to suggestions of others, without considering criticism as personal insult is:	41.1	53.3	70.0	66.6	70.0
3.	Involving them in management to improve productivity of some people is:	35.3	40.0	70.0	50.0	30.0
4.	Making decisions for people who prefer not to be involved in management is:	29.4	26.6	50.0	33.3	30.0
<u>G. Human Relations Concepts and/or Competencies</u>						
1.	The influence of business ethics (honesty and fair dealings) on results of my activity is:	52.9*	46.7	60.0	50.0	60.0
2.	"Customer" relations are:	41.2	43.4	70.0	66.7	60.0
3.	Making employees aware of goals and objectives is:	41.2	40.0	70.0	58.3	60.0
4.	In my business or organization, labor-management relations are:	41.2	53.4	70.0	50.0	70.0
5.	Relations with others, outside my business or organization are:	41.2	46.7	70.0	41.6	60.0
6.	For success in personnel management, my getting each person to do assigned duties to the best of his individual capability is:	35.2	53.3	60.0	58.4	60.0

* Percentages of Important and Very Important Responses were added together as a basis for rank ordering of individual items within each area, as perceived by the Expert Managers.

Table 29 (continued)

II. MANAGEMENT FUNCTION AREAS		Percentages of "Important" or "Very Important" Responses From:				
<u>H. Communications</u> <u>Concepts and/or Competencies</u>		Expert Man- agers	Other Man- agers	Agri- culture Teachers	Profes- sional Mgt. Educators	Other Profes- sionals
Numbers of Respondents (n)		17	15	10	12	10
1.	Clear transfer of information is:	41.2*	40.0	80.0	75.0	70.0
2.	Transfer of detailed information is:	41.1	40.0	80.0	58.3	70.0
3.	Accurate transfer of information is:	41.1	40.0	80.0	58.4	70.0
4.	The many factors which can stop or change information before it reaches the intended receiver are:	41.1	46.7	80.0	50.0	60.0
5.	Two-way communications, both from the manager down, and from the laborers up to the manager is:	35.3	46.7	70.0	66.7	70.0
<u>I. Atmosphere</u> <u>Concepts and/or Competencies</u>						
1.	The effect of atmosphere on workers' productivity is:	35.2*	53.3	50.0	41.7	30.0
2.	The influence of relationships with people on atmosphere is:	35.2	46.6	30.0	58.3	50.0
3.	The influence of material things worked with on atmosphere is:	23.6	60.0	60.0	41.7	40.0
4.	The influence of physical setting on atmosphere is:	23.6	60.0	50.0	41.7	40.0
<u>J. Size</u> <u>Concepts and/or Competencies</u>						
1.	The influence of size on the success or failure of my business or organization is:	41.2*	40.0	20.0	41.6	30.0
2.	The influence of the nature of activities within the business or organization upon its size is:	41.2	53.4	40.0	33.3	20.0
3.	The influence of my personal needs on the size of my business is:	35.3	46.7	40.0	41.6	10.0
4.	The influence of my organization's or business' size upon my personal involvement is:	35.2	60.0	30.0	41.7	10.0
<u>K. Change</u> <u>Concepts and/or Competencies</u>						
1.	Change based upon evaluation of facts is:	47.1*	40.0	50.0	66.7	50.0
2.	Change which contributes to improved goal achievement is:	41.2	60.0	60.0	58.3	60.0
3.	To change an organization or business by adjusting technology or methods is:	35.3	46.7	50.0	75.0	40.0
4.	Change of goals and objectives, as conditions are altered is:	29.4	53.4	50.0	58.3	40.0
5.	To change an organization or business by adjusting organizational structure is:	23.5	26.7	20.0	50.0	40.0
6.	Change based upon personal opinion is:	23.5	20.0	30.0	25.0	10.0
7.	To change an organization or business by adjusting people is:	17.6	46.6	60.0	58.4	40.0
8.	Change deliberately created, rather than as reaction to altered conditions is:	5.9	20.0	20.0	33.3	20.0

* Percentages of Important and Very Important Responses were added together as a basis for rank ordering of individual items within each area, as perceived by the Expert Managers.

Table 29 (continued)

II. MANAGEMENT FUNCTION AREAS		Percentages of "Important" or "Very Important" Responses From:				
L. Standards Concepts and/or Competencies		Expert Managers	Other Managers	Agri- culture Teachers	Profes- sional Mgt. Educators	Other Profes- sionals
Numbers of Respondents (n)		17	15	10	12	10
1.	Use of facts, gathered within the firm or organization as standards is:	58.9*	66.7	70.0	66.7	50.0
2.	Use of facts, gathered outside the firm or organization, as standards is:	58.8	53.3	60.0	58.4	30.0
3.	Standards for measuring success of my type of business or organization found in records of its past performance are:	53.0	66.7	60.0	66.6	40.0
4.	Standards for measuring success of my type of business or organization found in ideals to be hoped for, are:	47.0	53.3	50.0	41.7	50.0
5.	Standards for measuring success of my type of business or organization found in what others have accomplished are:	47.1	46.7	40.0	41.7	40.0
6.	Graphically comparing results achieved, with established standards is:	47.1	33.4	40.0	41.7	40.0
M. Evaluation Concepts and/or Competencies						
1.	Interpretation of information, as a basis for future recommendations is:	64.7*	66.7	60.0	66.7	70.0
2.	Identifying the weak points in the business or organization is:	52.9	66.6	80.0	58.3	60.0
3.	For the process of business or organization evaluation to continue at all times is:	53.0	40.0	70.0	58.3	70.0
4.	In evaluating the business or organization, securing information from many sources is:	53.0	66.7	70.0	50.0	40.0
5.	The treatment of information, to improve its usefulness in evaluating activity is:	53.0	53.7	70.0	50.0	60.0
6.	Selecting suitable methods of measuring success of my business or organization is:	47.1	60.0	80.0	41.7	60.0
7.	Collection of information upon which judgment is made relative to the success of activity is:	47.0	66.7	70.0	66.7	50.0
8.	Identifying the strengths of the business or organization is:	41.1	60.0	80.0	66.7	60.0
9.	Analysis of findings, to clarify their meanings is:	41.2	53.7	70.0	58.4	60.0
10.	For those who benefit from the activity of my business or organization to assist in its evaluation is:	29.4	40.0	80.0	41.7	50.0

* Percentages of Important and Very Important Responses were added together as a basis for rank ordering of individual items within each area, as perceived by the Expert Managers.

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