Factors related to the development of county agricultural extension programs in Iowa

Fabio Rodriguez-Torres

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FACTORS RELATED TO THE DEVELOPMENT OF COUNTY AGRICULTURAL EXTENSION PROGRAMS IN IOWA

Iowa State University

Ph.D.

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Factors related to the development of county agricultural extension programs in Iowa

by

Fabio Rodriguez-Torres

A Dissertation Submitted to the Graduate Faculty in Partial Fulfillment of the Requirements for the Degree of DOCTOR OF PHILOSOPHY

Major: Agricultural Education

Approved:

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For the Graduate College

Iowa State University
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CHAPTER I. INTRODUCTION

The Cooperative Extension Service was established by enactment of the Smith-Lever Act in 1914. The Act states that the Extension Service was "to aid in diffusion among the people of the United States useful and practical information on subjects related to agriculture and home economics, and to encourage the application of the same".

Therefore, the Cooperative Extension Service is a dynamic system oriented to the development of educational programs and designed to meet the changing needs of its clientele. It conducts educational programs which result in the development of skills, attitudes and understanding of people. The basic philosophy of the Cooperative Extension Service is to work with the people and not to work for the people. That means that the participation of the clientele in the extension program development process is a cornerstone in the expected outcomes. For this reason, local leaders and other laypersons are involved in identifying problems and needs of the people, analyzing situations, determining priorities and setting objectives in accordance with those priorities. They also assist the extension staff in planning, organizing, and evaluating programs in order to compare the outcomes with their objectives.

Naturally the responsibility for the program development process has been assigned to the extension professional staff. This is the responsibility of county and central staff which also is responsible for the administration of the service and for reporting its outcomes to the Federal Extension Service of the United States Department of Agriculture in Washington.
As in any other formal organization, the Cooperative Extension Service must develop a program which follows a process similar to the one mentioned by Newman (1963), who states that administration work may be divided into five basic functions:

1. **Planning**, that is determining what shall be done. It covers a wide range of decisions including the classification of objectives, establishment of policies, mapping of programs and campaigns, determining specific methods and procedures and fixing day-to-day schedules.

2. **Organizing**, that is grouping the activities necessary to carry out the plans into administrative units and defining the relationship among the executives and workers in such units.

3. **Assembling resources**, that is obtaining for the use of the enterprise, the executive personnel, capital, facilities and other things needed to execute the plan.

4. **Directing**, that is issuing instructions. This includes the vital matter of indicating plans to those who are responsible for carrying them out and also the day-to-day relationship between the "boss" and his subordinates.

5. **Controlling**, that is seeing that operating results conform as nearly as possible to the plans. This involves the establishment of standards, motivation of people to achieve these standards, and necessary corrective action when performance deviates from the plan.

The system through which the extension service accomplishes its functions is called program development which has been defined by Raudabaugh (1953) in the following manner:

Program Development is a continuous series of processes which includes planning a program, preparing a plan of work and teaching plans, taking action to carry out the plans and determining and reporting accomplishments.

Also the same author states that there are six parts or elements of county extension work which are recognized as essential for maximum effectiveness in the development of county extension programs. These six elements are:
I. Organization for program development.
II. Process for program development.
III. Planned county extension program.
IV. Annual plan of work and teaching plans.
V. Program action.
VI. Program accomplishments, evaluation and reporting.

There are certain basic assumptions which have a general application to the county extension program development. According to Raudabaugh (1953) these assumptions are:

1. The six elements of county extension work have a general application in all counties.
2. Every county has an adequately qualified staff of professional extension workers.
3. Every county has some organization and procedure for planning and conducting extension work.
4. County extension work is planned and conducted in line with the basic philosophy and policies of Cooperative Extension.
5. County extension work which is planned and executed on a coordinated basis results in greater total accomplishments.
6. Effective extension programs are planned -- they don't just happen.
7. County extension staff members provide professional leadership for the organization, planning action evaluation of accomplishments and reporting of extension work in a county.
8. Program accomplishments are greater when local people participate in the initiation, planning, action, evaluation and reporting of extension work in a county.

Boone (1978) considers that the extension programming process is viewed in many different contexts by the 50 state extension services.

Two common threads that seem to be pervasive in the several conceptions of the process, according to Boone (1973), include:

1. A belief that both professionals and lay leaders need to be involved in making decisions about what ought to be included in the extension program.
2. The data collected and analyzed by professionals and lay leaders must include both research-based and experience-based information.

The above consideration, put in a different way, implicates that programming encompasses all of the planned and coordinated educational activities of professional extension staff members and lay leaders. Even the actual learners are involved in designing and effecting educational strategies that should culminate in desirable changes of the extension target audiences.

The different phases through which the extension program development is carried out have been analyzed by Boone (1973) in the following manner:

1. The framework for programming consists of a philosophy that emphasizes the necessity and importance of involving people within a democratic atmosphere in program planning. A statement of broad institutional level macro-objectives toward which the program efforts of all Extension staff members are directed. These objectives have their origin in the contemporary needs of Extension's publics and they constitute the framework within which all decisions about the state level program and individual county programs must be linked. A structure that is designated to strengthen and facilitate substantive programming at the operational level. A management system that places emphasis on the exhibition of dynamic educational and managerial leadership at all levels of the organization.

2. The organization and development of an effective leadership system in each county and/or other designated geographic area for planning a substantive and relevant educational program; this system includes the organization and maintenance of a dynamic leadership group at the county or area level whose membership is representative of the many publics in the population.

3. The systematic involvement of the total leadership system (macro-level program leadership group) in studying and analyzing the social and economical situations of the country and/or area and in identifying educational needs is one of the most essential and important tasks in the Extension programming process.
4. Translation and incorporation of needs, problems and opportunities identified by the leadership groups into a long-range program or educational blueprint. This blueprint can provide for the Area and County Extension staff members a direction in purposefully guiding their efforts toward the fulfillment of the major educational needs. It likewise can serve as the Extension agent curriculum from which annual plans of work and short-term teaching units are derived.

5. The operationalization and implementation of the long-range program. To operationalize and implement the long-range program, county/area Extension agents must analyze the macro needs contained therein, pinpoint micro needs inferred in each of the macro needs, and develop annual plans of work.... The purpose of the annual plan of work is to provide agents and leaders an orderly and effective educational approach for attacking problems and needs specified in the long-range program. Therefore an annual plan of work should speak about specific microneeds derived from the macroneeds and contain specific plans for treating in an educational context each microneed.

6. The implementation of the annual plan of work by county and area Extension agents requires their continual attention. Four important tasks must be accomplished by the county Extension personnel in implementing the annual plan of work:
   a. Identify and utilize the resources needed to implement and carry out effectively on planned learning experiences.
   b. Make provisions for the continual monitoring of the planned learning experiences.
   c. Provide for the continuous reinforcement of learners.
   d. Adapt and/or redirect learner activities as observations and feedback infer the need of such changes.

7. Evaluating or determining the impact of the planned program in effecting desired behavioral changes in the public toward whom the program is directed.... The major responsibility for basic program evaluation rests with the county/area Extension unit. That is the results obtained through county/area-based programs, plans or work, and teaching plans must be determined before judgements can be made about the effectiveness of the service overall programs....

   ... from an operational context, three major processual tasks are inferred for Extension agents in program evaluation and accountability:
   a. Agents must specify program outputs (evidence) in relation to teaching-learner level objectives.
   b. Agents must study, analyze and evaluate program inputs at
the instructional program, decision-making, and institutional levels in relation to their appropriateness and effectiveness in generating desired program outputs specified in the teaching-learner level objectives, the plan of work, and the long-range county Extension program objectives.

c. Agents must exhibit skills in interpreting results or program outputs in relation to objectives and inputs, in the actual utilization of those finding as a basis for modifying and/or redirecting Extension program efforts, and in accounting to the publics and funding sources.

Beavers (1962) conceptualizes program planning as a cooperative effort between the extension staff and the local people in identifying the community's major problems. In this respect she says:

Program planning is a means used by the Cooperative Extension Service to aid people in identifying their major problems. Historically Extension has believed in the cooperation of local people in determining program emphasis.

Thus, the involvement of professionals and lay leaders in the group planning of extension programs assumes that the people involved have common problems, interests and aspirations.

In the same sense, extension planning is broken down from national to state and county units to provide consideration for the specific interests of those groups with related values, needs and interests.

The next step after program planning which is program implementation is basically the application of effective methods designed to achieve the objectives determined in accordance with the people's needs. This aspect implicates the preparation of a strategy of plan of work, in which the county extension professionals determine the different activities to accomplish the objectives decided upon in the previous phase.
In regard to this phase of the program development, Boone (1978), states that:

The actual implementation of teaching plans is a crucial task that confronts change agents. Teaching plans are useless unless they are implemented...

The implementation plan that Boone discusses must deal with the specific needs of the audience as well as the availability of resources to carry out the plan.

In dealing with the resources of the extension service, Maunder (1972) states that:

The way extension work is financed in a country reflects to a large extent the degree to which local bodies and farm people are interested in the program and the importance they attach to it as a means for raising rural standards...

The final step of extension program development is program evaluation, through which it is possible to determine the extent to which the outcomes obtained were congruent with the objectives established. Iverson (1973), believes that:

The purpose of evaluation is to improve programs through providing information on which to base programming decisions....

Therefore the evaluation phase seems to accomplish two different objectives: determining the results of past programs and providing input to improve the future ones.

According to Slaybaugh (1967) and Lawrence (1974), the extension program development is the job of extension personnel. They also agree in defining this job as:

The process used in the determination, conduct and evaluation of extension programs which are designed to meet the needs of people.
This research considers that the three aspects mentioned in the former discussion are the ones of extension work which the county extension professionals have to deal with most closely in their jobs. For this reason, factors related to those aspects of the county agricultural extension programs have been considered as the framework for the purposes of the present study.

The following general objective has been prepared to provide direction for this study:

To identify some factors associated with the effectiveness of the county agricultural extension programs through the phases of planning, implementation and evaluation.

The specific objectives are:

1. To analyze the experiences of a selected group of Iowa County Extension Directors about these factors.

2. To generate hypotheses in accordance with the outcomes produced through the observational analysis of the information collected.

3. To determine attitudes of County Extension Directors in regard to the importance of some factors related to the agricultural extension formal programs.

4. To provide recommendations for further studies, in accordance with the hypotheses generated.

In accordance with the nature of this study, which is basically exploratory, it will have the following apparent limitations;
1. The sample that has been utilized is not necessarily repre­sentative of all of the counties of Iowa.

2. The counties included in the sample were selected according to the following characteristics:
   a. Their geographical location, in Central Iowa.
   b. Their highly effective agricultural extension programs.

Therefore, such a procedure did not allow a randomization in their selection. The counties were independently selected by a jury of experts from the Iowa State Cooperative Extension Service.

3. The statistical analysis will be limited due to the type of study and the nature of the data collected.

4. The type of analysis used with the data will not permit conclu­sions as to the interaction effects between variables or their relative importance.

The following assumptions have been made in regard to the implica­tions of this study:

1. The Iowa Extension Service is directed and oriented on the same basis and philosophy as the United States Federal Extension Service.

2. County Extension units in Iowa are quite comparable with respect to staffing patterns, program areas, budgetary sources, type of clientele, and linkage with county, state and federal government bodies.
CHAPTER II. REVIEW OF LITERATURE

The main functions of a review of literature are:

1. To determine what work both theoretical and empirical has been previously completed and reported.
2. To help delineate the problem areas.
3. To provide possible theoretical frameworks for interpretation of findings.
4. To provide suggestions for measures of the concepts.

Each of these functions is related to the various sections of this study, and although most of the literature that has been reviewed is presented in this chapter, other portions judged relevant will be cited in the appropriate sections.

This procedure is similar to that used by Blount (1960), Campbell (1959), Powers (1960), Johnson (1962), and Iverson (1964).

Organizational and Legal Structure of the Iowa Cooperative Extension Service

The Iowa Cooperative Extension Service exhibits the characteristics of a bureaucracy. According to Webster's Dictionary (1974), a bureaucracy is defined as:

"A system of government with many subdivisions and a large staff of bureau chiefs."

In the concept of Weber (1964), some of the characteristics of the bureaucratic structure are:

There is a principle of fixed and official jurisdictional areas which are generally ordered by rules, that is by laws or administrative regulations.
The regular activities required for the purpose of the organization are distributed in a fixed way as official duties.

Methodical provision is made for the regular and continuous fulfillment of these duties and for the execution of the corresponding rights; only persons who have the generally regulated qualifications to serve are employed.

The organization of offices follows the principle of hierarchy; that is, each lower office is under the control and operation of a higher one.

Experience tends universally to show that the purely bureaucratic type of administrative organization is from a purely technical point of view, capable of attaining the highest degree of efficiency.

Characteristics of the Iowa Extension Service are consistent with those set down by Weber (1964), and they may be summarized in this way:

The regular activities of the Iowa Extension Service are distributed in a fixed way. Thus, activity fits into categories such as administrative, subject-matter and supervisory. The personnel in each of these categories have specific activities to perform.

Technical competence is one of the main criteria for employment in the Iowa Extension Service. Certain formal educational requirements in one or more of several specified areas of study are a prerequisite for employment. The organization also promotes the in-service training of its employees as a means to keep them current in their fields of technical expertise and to provide for their professional development.

In the Iowa Extension Service there are several jurisdictional areas broken down in accordance with their geographical location.

The organizational structure of the Iowa Extension Service is based upon a hierarchical division, in which the functions, roles and responsibilities of the administrative units are defined in accordance with established operational rules.
The Iowa Extension Service has both line and staff officers. The line officers are those who exercise authority over those occupying subordinate positions. The staff consists of subject-matter specialists who provide specialized knowledge and technical advice, but do not exercise authority over other personnel in the organization.

In dealing with the operational rules of the Iowa Extension Service, Johnson (1962), states:

The rules in some cases allow some flexibility. Thus it is a rule that each county in the state will plan an educational program which will set down the problems and objectives toward which educational efforts will be directed for a specified period of time. It is further a rule that local people will be involved in the determination of the problems and objectives....

For more than 35 years the Cooperative Extension Service was sponsored in Iowa counties by county Farm Bureau Organizations, in cooperation with Iowa State University and the United States Department of Agriculture. In 1955 the 56th General Assembly of Iowa passed a new extension act, the "County Agricultural Extension Law" which created county extension districts and transferred responsibility for conducting the extension program within the county to elected county agricultural extension councils.

Therefore, the basic philosophy of Extension of involving local people in county program development is reinforced through a legal act. Following the passage of the Smith-Lever Act in 1914, a memorandum of understanding was signed between the United States Department of Agriculture and Iowa State University regarding cooperative extension work in agriculture and home economics.
According to Donhowe (1976), this memorandum provides that:

1. A state extension director who must be satisfactory with the U.S. Department of Agriculture, shall be appointed by the State Board of Regents.

2. All funds appropriated for extension work from federal or state funds are to be administered through the Cooperative Extension Service in Agriculture and Home Economics of Iowa State University.

3. Iowa State University will cooperate with the U.S. Department of Agriculture in all extension work conducted in the state.

4. Extension work in the state shall be planned under the joint supervision of the Extension Service of Iowa State University and the Extension Service of the U.S. Department of Agriculture.

5. All extension personnel, unless otherwise expressly provided, shall be joint representatives of Iowa State University and the U.S. Department of Agriculture.

The same principles upon which extension work was built in Iowa over a long period of years, were those taken into consideration by the legislators that framed the "County Agricultural Extension Law." According to Donhowe (1976), those principles are:

1. The function of the Extension Service is to disseminate useful and practical information on subjects relating to agriculture, home economics, and rural and community development to all people in the state.

2. In general extension programs can best be conducted through local groups of people.

3. A locally elected group should be assigned responsibility for the planning, guiding and directing of the local program according to the needs of the people in the county and in cooperation with Iowa State University.

4. The legal framework for the conduct of extension work should provide for flexibility and local initiative in the program.

5. Extension work is most successful when provision is made for a portion of the funds coming from sources within the county.

Moreover, the County Agricultural Extension Law as passed by the 56th General Assembly provided for the creation of a county agricultural extension council in each district, composed of one elected resident
member from each township in the county. The county agricultural extension council members are volunteers and they can not be paid a salary or receive fees for their services.

In regard to the county agricultural extension council's powers and duties, Section 10 of the County Agricultural Extension Law, cited by the same author, in its paragraphs "c" and "o", says:

(c) To serve as an agency of the state and to manage and transact all of the business and affairs of its district and have control of all the property acquired by it and necessary for the conduct of the business of the district for the purposes of this act.

(o) To expend the "county agricultural extension education fund" for salaries and travel, expense of personnel, rental, office supplies, equipment, communications, office facilities and services, and in payment of such other items as shall be necessary to carry out the extension district program....

Thus, the county extension councils have been entitled by the aforementioned law to participate in the development of county extension programs, as well as to manage the funds and other county resources needed to carry out those programs. In this respect, knowledge about people's needs, personal capability, and willingness to cooperate are basic traits that each member of the county extension council must possess in order to effectively contribute to the achievement of the extension objectives.

Extension Administration and Program Effectiveness

The way in which the county extension council members combine their efforts and personal experiences working as a team in cooperation with the extension professional staff, shall determine the extent to which the objectives and goals of extension will be achieved in a county. Therefore, the selection of the county extension council members may be
one of the most crucial decisions that the people of a community have to make if they hope to elect individuals that really are going to be capable of representing them.

In relation to the council member selection, Pesson (1966) states that:

The criticalness of this selection, however, is cumulative; educationally, the people involved can be taught regardless of who they are, if the right approach is made for the particular group involved. But the indirect influence emanating from the committee members to others can be affected greatly by the degree to which these members are "key" individuals in the relevant social system to be reached.

Then he concludes:

Indirectly, then, there is a profound influence upon the effectiveness of Extension teaching in its total scope. If these "key" individuals actively aid in the legitimation and communication of ideas and practices expoused in program planning deliberations, the effectiveness of Extension teaching can be greatly facilitated.

Technical and administrative skills, particularly in planning, coordinating, implementing, and evaluating programs, as well as the leadership abilities of the extension professionals, especially the county extension director, are essential complements of the ones mentioned above for the county extension programs to be successful.

In regard to the administrative skills in the extension work, Ferguson (1974) points out:

Extension administration at any level involves the art and skill of working with people to accomplish the objectives of the Service. Such an examination of Administration is considered appropriate specially in light of present emphasis in Extension on assigning administrative responsibilities at the district or regional level. Too often good county agents with brilliant careers of leadership, have faltered under the morass of management chores or with the assignment that they organize and guide the effort of others....

... the extension work, if well done, must be soundly underwired by a deep sense of values held by the leader and communicated by action as well as words to his associates.
On his part, Mees (1963) states:

Extension directors and training leaders are demonstrating an increasing concern over the effectiveness of administration in Extension. This is evidenced by the fact that more Land-Grant institutions are establishing graduate degrees in Extension Education or Extension Administration.

Also, within the past few years, regional and state Extension schools have offered specific courses in county administration.

With respect to the selection and designation of a person to direct the county extension work, the same author states:

As soon as a person is designated chairman at the county level, questions arise:

1. Is his job strictly administrative or will he be expected to continue performing some of his former functions?
2. What is to be the extent of the county chairman's authority?

These are "knotty" questions and require deep thought and planning before satisfactory solutions can be determined.

Gulick and Urwick (1947) point out:

Whatever the function being considered, the chief characteristic of a staff member is administrative ability.

Afterward, Mees (1963) concludes:

Directing the county program may be a pleasant experience for the chairman and the staff or it can be frustrating and confusing. A job description outlining in clear, concise terms the duties and responsibilities of each position and the lines of authority attached to each can help clarify administrative responsibilities.

Another important aspect that must be considered in the effective administration of the extension service is the wise use of available resources in order to better serve its clientele. In this regard Vincent (1953) stated:

The Extension Service has at its disposal resources in the form of professional and volunteer workers, funds and technical knowledge and skills, which must be used economically if the maximum contribution is to be made. The user of Extension services in the achievement
of his ends also has limited resources which must be economized in production (or consumption).

He further stated:

We have the situation, then, where the end of one unit of economic decision becomes the "means" for another. The resources of Extension produce a service which in turn becomes a productive resource to be employed by many persons in the attainment of their goals. At both ends of this means-end scheme, decisions must be made which determine the distribution and uses of the particular resources involved.

Therefore, it is necessary for the extension program planners to make decisions on what programs will be most useful for their target clientele in accordance with their needs and available resources.

Naturally, most of the needs that the agricultural extension programs are going to meet are those related to economic ends. These must be provided for the farmers through different practices and systems oriented to increase their production yields by using their resources in an efficient manner. In essence, this is the rationale of an effective administration, and if extension professionals are to teach and advise the farmers about it, they should use it themselves in their organization and programs.

In dealing with the extension purposes and the use of extension's resources, Vincent (1953) points out:

Educators evidently are not merely concerned with allocating scarce resources within a given value system, but are also interested in changing value systems in association with given resources.... The extensioner, in making a variety of administrative decisions, must be a composit economist, sociologist, psychologist, and political scientist, or have counselors from these disciplines at his disposal. Economics specifies how resources should be used in production while sociology, psychology, ethics and political science, specify the limitations which are placed on choice through laws, customs, and other expressions of individual and group values.
Although it is practically impossible for county extension professionals, who have been trained in one or two correlated disciplines, to be knowledgeable in all of the fields mentioned above, they have assistance from subject-matter specialists in making necessary decisions.

On the other hand, because of their functions, county extension directors must deal with many different aspects of human relations and leadership, and the effectiveness of county programs depends to a great extent upon the way in which they may manage their relations with subordinates and volunteer workers. In this respect, Bruce and Carter (1967) make a point that reflects this aspect:

In an organization such as Extension, administrative tasks are performed by all professional personnel who have assignments that require planning for and with, supervising and appraising the efforts of others -- either other professionals, lay leaders or clientele. Personnel with these responsibilities have opportunity to influence the milieu (environment setting) in which others are to function and presumably, to be productive contributors in helping achieve the organization's objectives.

Approaches to Program Planning,
Implementation and Evaluation

Program planning

Extension program planning involves several "key" concepts which are related to the effectiveness of the programs. These concepts are: people, needs, interests, priorities, resources, objectives, and decision-making.

Extension planners must constantly use these concepts within the planning process, in order to produce sound programs for their clientele. It could be stated that the extent to which these concepts are taken into
account by the planners will be directly related to the impact that the programs are going to have on their target audiences.

A sound plan is the structural frame upon which the program will be built. In this respect, planning is perhaps the most important stage of the program development process.

In the extension literature, planning is one topic in which much information has been written. Extension writers have offered different opinions about the planning process. Most authors are more descriptive than analytical in nature, but practically all of them present planning as the basis on which extension programs are built.

In a simple way, Newman (1963), has defined planning as "determining what shall be done." For Myerson and Banfield (1965), planning is "a course of action to achieve ends." Also, those authors consider that:

"Efficient planning" is that which under given conditions leads to maximization of the attainment of relevant ends.

On his part, Vanderberg (1965) thinks that:

Planning is a positive, dynamic, useful and effective term when the concepts involved are understood and applied....

And for Sanders (1966) the Extension program planning is:

The process of making decisions about the direction and intensity of the educational effort of the Cooperative Extension Service.

The same author further states:

... this fundamental decision making process which is similar for all educational agencies is specially acute for each Extension staff unit.... The astuteness and accuracy of the decisions influence greatly the quality of the programs conducted for the benefit of the clientele groups and its impact upon them.
In Boyle's (1965) point of view:

Program planning is viewed as a process through which representatives of the people are intensively involved with Extension personnel and other professional people in four activities:

1. Studying facts and trends.
2. Identifying problems and opportunities.
3. Making decisions about problems and opportunities that should be given priority.
4. Establishing objectives or recommendations for future economic and social development of a community through educational programs.

The above definitions suggest a process in which a series of actions culminate in the accomplishment of a goal.

In regard to the planning process Beavers (1962) conceptualizes the following:

With the advance in science and technology, the broadening of Extension's clientele and its great variety of needs and interests, planning has become increasingly important.... County Extension programs planned by local people form the basis for Extension work and are the means the Extension Service uses to accomplish its purposes.

Program planning thus becomes a means to an end. It should result in the development of a program which when executed will affect certain changes in behavior.

A sound rationale for program planning, if it is to be effective, must give consideration to the resources of extension in order to set up realistic objectives in accordance with them.

Porter (1962) approaches extension planning from the extension's human resources; he states:

The crucial nature of the program planning phase in the development of Extension programs is partly a reflection of the increased scope and broader orientation of the Extension work.... Meeting the educational needs of this larger, more sophisticated and more
complex audience with the probability of only moderate, if any, increase in the size of the Extension staff, will require much greater emphasis on program planning.

Beavers (1962) believes that program planning is a means for achieving four overall objectives:

1. Developing an Extension program based on the problems identified cooperatively by the people and by the Extension staff members.
2. Providing a favorable climate for action in regard to the problems identified.
3. Developing leadership abilities among those involved in program planning.
4. Providing a basis for the evaluation of the accomplishments.

In regard to the program planning process, at the county level, Jans (1952) pointed out:

Planning is the process whereby the local people and county extension staff cooperatively arrive at an understanding of (1) the situation in which the people are located; (2) the real problems in the local situation; (3) the objectives of the local people in relation to the problems; and (4) recommendations for reaching the objectives.

According to Boyle (1965) there are eleven principles which were selected and suggested as guideposts for program planning groups in the Cooperative Extension Service. They are:

1. Over-all objectives of the agency should be considered.
2. Educational needs of the potential program participants should be considered.
3. Interests of the entire community should be considered.
4. A wide range of resources should be given consideration.
5. The planning group should include local citizens who are potential participants in the program.
6. Democratic processes should be used wherever possible in planning the program.
7. Various methods which might be used in reaching the objectives should be explored in the planning.
8. The program planning process should be continuous.
9. The program planning process should allow for flexibility.
10. Provisions should be made for appraisal and evaluation of the program.
11. The planning group should coordinate its planned activities with those of other adult education agencies.

Several of the principles make reference to the involvement of lay people within the process. As mentioned in other parts of this paper, the extension philosophy is strongly oriented toward the active participation of its potential clientele. They identify needs and problems of the community, establish priorities and objectives, and organize sound educational programs through which their needs and problems are going to be solved.

Such participation of lay people in extension programs is framed and monitored through the county extension councils whose main functions were described previously. Sub-committees of the advisory council may function to assist the county extension professional staff in planning specific technical programs at the county level.

One of the aspects that is important to consider in regard to the county extension volunteer committees, is that their objectives and functions must be clearly defined.

Every member of a volunteer committee must be aware of their role in order for them to offer support and knowledge to the achievement of the extension objectives. Sound relationships between the volunteer committees and the county extension staff must be a common goal in order for both parties to be motivated and willing to do their best.
In this respect, Wilkening (1958), who conducted a study about the role definition of extension agents and local committee members, stated that:

Effective relationships between people requires that there be some agreement or consensus with respect to objectives of the system and how these objectives are going to be attained. Because of its strategic position in the system, the degree of consensus between local committee members and the agents is of crucial concern for an effective Extension program.

Afterward he concluded:

If the local sponsoring committee is to give the extension program sanction and support it is important that they see the objectives, roles and procedures as the agents see them.

Beavers (1962), believes that:

The involvement of local people in the planning process is the most effective method of motivating them to action.

Newman (1963) is more cautious in his appreciation about the use of committees in an organization. He thinks that they may have the following advantages and limitations:

Advantages:
1. Provide integrated group judgment.
2. Promote coordination.
3. Secure cooperation in the execution of plans.
4. Train members and obtain continuity of thinking.

Limitations:
1. Slow and expensive action.
2. Divided responsibility.
3. Danger of compromise decision.

In the case of the extension service's volunteer committees the first limitation mentioned by Newman has no apparent validity as the committee members are volunteers who are not allowed to receive a salary
or other kind of fees for their services. Moreover, they are "clients" of the extension service. Therefore, they are interested in the extension programs to help them in solving their needs and problems, as well as the ones of the people they represent. Thus, if extension programs are providing benefits for them, the slowness in the council's action is going to affect their own interests.

An important role of the extension staff, and particularly of the county extension director is to constantly motivate the extension council members to attend council's meetings, provide ideas, be critical when necessary, and help to make decisions on the extension programs. Therefore, good communication and coordination are essential tasks of the county extension director in fostering the council members' action.

Barnard (1938) emphasized on the importance of an effective coordination and communication in any organization; he stated:

Organization simple or complex is always an impersonal system of coordinated human efforts; always there is a purpose as the coordinating and unifying principle; always there is the indispensable ability to communicate, always the necessity for personal willingness and for effectiveness and efficiency in maintaining the integrity of purpose and continuity of contributions.

In the opinion of Pesson (1966), three basic premises underline the concept of involving lay people in extension program planning:

1. The involvement of lay people in the planning process will speed up the process of educational change among people.
2. The involvement of representative lay people will result in better decisions than those made by the professional staff alone.
3. The involvement of individuals in planning activities is a beneficial learning experience.
In regard to the group work, Blount (1950) says:

When individuals come together for the first time to attempt to work together as a task, the early stages of group activity are usually conceptualized as the process of group formation. After a period of time which varies greatly among groups, the individuals may become integrated into a relatively smooth functioning and productive group; then, the task becomes that of performing functions that will help maintain the productivity of the group.

In other words, any group composed of people with different characteristics, experiences and background, needs a period for their members to get acquainted with the objectives of the group, and integrate themselves as members of it. Because of this, after a county extension council has been elected for a new term, its members are provided specific training which enable them to know their responsibilities and the council's objectives, as well as the operational procedures of the council.

One critical aspect in the effectiveness of the county planning committee is the characteristics and qualities of its members. In that respect, Richert (1966) contends that:

The mere representation of people and interest in program planning committees is not enough. The representatives should be individuals who exhibit leadership traits, whose perspective goes beyond their own group boundaries and who are interested in the work of the program planning committee.

On his part, Kempfer (1966) states that:

Intelligence, social vision and leadership experience are additional assets, specially for members of general committees. On special committees, intimate acquaintance with the problem of concern is highly desirable.

For Pesson (1966), the selection of the committee members is not a critical issue since they may be educated for their functions and duties. He maintains that:
People involved can be taught regardless of who they are if the right approach is made for the particular group involved... most research findings point out that when lay citizens receive special orientation and training prior to their involvement in the planning process, they perform their roles more effectively and gain more satisfaction from the planning experience.

A study by Blount (1960), provides some useful suggestions in respect to helping lay citizens understand the objectives of planning, the means to be used in planning, and the authority vested in them in implementing these means. Some of these suggestions are:

a. Proposed objectives, means and authority structure must be clearly thought, understood, agreed upon and written down by those responsible for the development and presentation (the professionals providing leadership for the planning process).

b. The objectives, means and authority should be logically consistent and stated in simple language at a practical use level.

Another concept that is considered relevant for the extension council objectives, and for improving its efficiency and cooperation with the county extension staff, is the teamwork idea. Teamwork means that a collective effort is necessary to think about and take action to solve a problem, or make a decision. In general, teamwork should be employed when the problems to be solved are complex and require a variety of perspectives.

Cosgriffe and Bailey (1969) think that the teamwork is justified where

1. Group solidarity on a particular issue or program is required.
2. Each person selected can make a unique contribution.
3. The various and diverse contributions are coordinated.
4. Its use is not a substitute for action.
5. The sum of deliberations and alternative courses of action add to more than the courses of action developed by individuals had they been working independently.
As the extension council members are not elected because of their technical knowledge, but their knowledge about the community needs and problems, they need the advice and assistance of the extension professionals, particularly the subject-matter specialists, who have the technical knowledge, to make the necessary decisions on program planning.

One contribution of the teamwork idea to the extension council work is that the council may be formed by individuals with similar values and aspirations, but perhaps with quite different experiences. Therefore, if every member is committed to a common objective, then different experiences along with the technical knowledge of the extension subject-matter specialists will provide a solid basis for making decisions about the programs.

Council members need to be motivated to a permanent commitment, and here is where the leadership abilities of the county extension director play an important role. The director must look for systems to maintain the enthusiasm, initiative and cooperativeness of each council member. This is the first step in the effectiveness of the council.

Reisback and Reynolds (1976) think that the selection of experienced members for the extension program planning committees is important to provide ideas about the solution of the problems. In this respect, they state:

Members of client groups, if they are well chosen, can bring with them facts and ideas of real problems, and why those problems exist, because they have experienced the situations.... Lay citizens on Extension program committees may also provide some subject-matter expertise.

Blount and Beal (1961) emphasize the importance of the organizational skills of extension professionals, when working with groups.
They point out:

As educational leaders, Extension personnel are not only expected to be expert in the traditional subject matter areas such as agricultural science, home economics, economics of management, etc., but they are also expected to be expert in the area of educational organization techniques. Thus, they are constantly introducing new groups to traditional organizational structure and processes and are introducing new organizational structures and processes.

In a study dealing with the functions of a program planning steering committee in Iowa, Almquist (1962) found that six general implications were evident from the data for the program planning process.

They were:

1. The county staff must be able to provide competent guidance and direction to the program planning process.
2. The steering committee should be provided with explicit and detailed statements of their authority.
3. The steering committee must be effectively oriented in order to carry out their responsibilities in the program planning process.
4. The steering committee responsibilities should be integrated for their application to the program planning process.
5. The steering committee should be involved in activities other than planning county Extension programs.
6. The steering committee should be aided in organizing itself for effective interaction.

The main functions that a program planning committee must accomplish, have been summarized in the Iowa Extension Program Development Manual (1957) as follows:

1. Help initiate program development procedures.
2. Assist in developing and establishing organization techniques that provide opportunities for people to take part at community and county levels.
3. Help evaluate effectiveness of County Program Development procedures.
4. Discover basic problems of people.
5. Determine extent and intensity in problems before including them in the program.
6. Make suggestions for the county Plan of Work.
7. Help interpret the program to local groups.
8. Participate in carrying out the program.
9. Maintain working relations with special interest groups.

Vanderberg (1965) thinks that:

The quality and quantity of contributions from planning committee members increase when special orientation is provided to them and provisions are made for various members to probe, study and analyze specific program areas.

Two crucial steps must precede the actual conduct of an extension program activity. The first step is identifying the needs, interests and motivations of previously identified clientele. The second step is deciding on priorities, goals and objectives relevant to the agreed upon needs and interests of the clientele.

In the concept of Frutchey (1966), a need may be thought of as disparity between a present and a desired situation. The gap between both situations determines the actual need.

Needs of people are generally of two major kinds: those of which they are aware and those of which they are unaware. They are referred to as felt and unfelt needs. The determination of them is the first consideration in extension program planning.

According to Sanders (1966), there are several sources from which needs of the extension service clientele are identified. Among them are:

a. The questions asked by the public (which are expressed needs.)
b. The Extension agents themselves, who know the county and have identified both felt and unfelt needs.
c. County plans of work developed by local leaders and the agents reflect such needs of the people.
d. Program-projection plans identify needs of a long-range nature.
e. Extension specialists, who are well-informed about the situation in the state and about research findings available. They are good sources of needs of which people are often unaware.
f. The United States Department of Agriculture comprises another source.
g. Dealers of agricultural supplies, teachers and others are also in the position to identify the needs of people.
h. Findings of Extension studies.
i. Test questions, which indicate the level of knowledge about a subject are also indicators of needs.

The county program planning committees as well as the extension professionals must have the ability to combine the different sources and identify the needs that require immediate attention.

In the concept of Leagans (1974):

Needs represent an imbalanced lack of adjustment or gap between the present situation or status quo and a new or changed set of conditions assumed to be more desirable. Needs may be viewed as the difference between what is and what ought to be.

The "what is" can be determined through a detailed study of the situation. To be useful, facts must be carefully selected, analyzed and interpreted by the extension professionals and the lay leaders.

What "ought to be" can be determined from research findings and value judgments.

In determining the needs of people, lay leaders and extension personnel must know the people's values in order to assure that the alternatives they are proposing are congruent with their own values.

For example, research may show that the use of recommended practices in corn production can result in a 10 percent larger yield, but,
in order to obtain that yield, the farmer needs to invest additional inputs to his corn crop, such as, fertilizers, machinery use, time, etc. The farmer may not see great value in reaching a higher production at that particular moment, as he may have in mind some different idea that may be more important for his to invest his time and money, such as improving his home, or acquiring more or better machinery, etc.

In other words, the felt needs may be more important for the extension clientele than the unfelt ones; however, the persuasion ability of the extension professionals might influence the farmer to change his mind and experience the idea, particularly if it is going to be beneficial not just for the individual but for the other people in the county.

One basic aspect of the extension success is to have people trying and applying new ideas and practices that have been already tested by the researchers or the experimental laboratories and farms. Obviously, the application of those ideas by the farmers may include some risk which they usually are not willing to take, unless other people have experienced it before without problems.

In other words, the persuasion of people to adopt unfelt needs is a more difficult and challenging task for the extension professionals than the orientation of them to solve their problems and meet their needs. When a new idea or practice is presented, farmers go through a process before adopting. They weigh some factors, such as: the type of risk and change involved in the adoption of the new practice. The economic, educational and social statuses, as well as the individual values of the potential adopters, also have influence in the process.
Such a process has been named: Adoption Process, and is defined by Rogers (1962) as:

The mental process through which an individual passes from the first hearing about an innovation to its final adoption.

According to the same author, the Diffusion Process is composed of five progressive steps, as follows:

1. **Awareness**, or "first knowledge," where the individual is exposed to the innovation but lacks complete information about it.
2. **Interest stage**, where the individual becomes interested in the new idea and seeks additional information about it.
3. **Evaluation stage**, where the individual mentally applies the innovation to his present and anticipated future situation, and then decides whether or not to try it.
4. **Trial stage**, where the individual uses the innovation in a small scale in order to determine its utility in his own situation.
5. **Adoption stage**, where the individual decides to continue the full use of the innovation.

The rapidity with which individuals will adopt an idea, depends upon their personal characteristics. Some people in a county have a tendency to adopt new ideas faster than others who have a tendency to avoid changes in their practices and lifestyle. In this respect, Foster (1971) maintains that:

Each society can be thought of as a host of two kinds of forces: those which seek to promote change, and those that strive to maintain the status quo...

In accordance with such a situation, it seems to be more difficult for the extension directors to be successful in their program objectives when they have to deal with people of the second force.

Foster (1971) concludes by saying:

The most successful guided technological development occurs when program planners and technical specialists are aware of the
struggle between the forces for change and the forces for stability found in all cultures.

The time span needed for the people to go through the adoption process and finally adopt a new idea is categorized according to Rogers (1962), as:

1. **Innovators**: people eager to try new ideas.

2. **Early adopters**: they are more cautious in adopting a new idea, and a more integrated part of the local social system than are innovators.

3. **Early majority**: people who adopt new ideas just before the average member of a social system.

4. **Late majority**: people who adopt new ideas just after the average member of a social system. They tend to be skeptical.

5. **Laggards**: the last people to adopt an innovation. They tend to be frankly suspicious of innovations, innovators, and change agents.

Rogers (1962) further states:

Because a change agent's social position is located midway between bureaucracy to which he is responsible and the client system in which he works, he is subjected to various role conflicts. The change agent is often expected to engage in certain behaviors by his professional system and at the same time he is expected by his client system to carry on quite different actions.... Research results show that change agents reach the upper social status portion of their clientele, disproportionately more than the lower strata.

Zaltman and Duncan (1977) state that:

One of the basic functions performed by a change agent is to establish a link between a perceived need of a client system and a possible means of satisfying that need....

Afterward they state:

Change agents are to be more effective if they:

1. **Stimulate the user's problem-solving process.**

2. **Are sufficiently knowledgeable about the research and development processes that produce solutions so that they can help stimulate these processes to function more consistently with client needs.**
3. Are able to foster communication and collaboration between client systems and between change agencies.

4. Are willing to listen to new ideas with constructively critical ears.

5. Are able to introduce flexibility into the relationship between client and change agency in the extent that adaptation of the need-satisfying product or service of the circumstances of its use becomes necessary.

Finally they conclude:

However, the best change principles are unlikely to achieve their maximum effect if change agents themselves are inadequate interpersonally or in expertise.

The following comment of Thorndike (1935), relates to extension's constant challenge on needs determination and people programs:

If an educated adult for any reason is induced by any force, no matter how external, to want to learn a certain thing, no matter how remote learning it is from his other deeper and more "real" needs, he can learn it provided, of course, that it is within his powers.

The importance of analyzing data when identifying needs and problems has been emphasized by Pesson (1966), who points out:

The analysis of data collected in situation determination is just as important as the data procured. Without proper analysis, data are only a mass of facts without a real meaning. The ability to take data and translate it into usable information about the situation is of extreme importance in program planning. In fact, even the most accurate data are worth nothing unless properly interpreted.

One of the important steps in the analysis process is the determination of the relative importance of each problem.

Commenting on the importance of this process, Watkins (1966) maintains that:

The role of Extension is changing from one of motivating people toward the adoption of improved practices to one of solving problems -- Practices must be adapted for problems to be solved, but problems are not always what they appear on the surface. A careful and probing analysis of the situation is often necessary to
reveal causes which must be attacked and removed for the problems to be solved.

The combination of effort and knowledge by the local leaders about the county's situation, and the expertise of the extension subject-matter specialists and the county professionals is important in analyzing the situations and identifying problems.

Naturally, the interest of the people in solving their problems is a basic ingredient in the extension educational process. Thorndike (1935) states:

Any educational enterprise with adults will be planned and executed better with knowledge of their interests than without it.

In regard to the situational fact analysis, Pesson (1966) further stated:

Three kinds of situational facts are needed. They are social, economic, and technological. Social data are needed for two reasons. First, they indicate areas of concern, such as attitudes that need changing. Secondly, they indicate the characteristics of audiences useful in identifying approaches for creating desirable learning situations. Economic data indicate relevant problem areas, particularly those that identify problems of the total audience of the Extension staff unit. Technical data indicate problems also, particularly in the area of practices recommended to Extension clientele.

The subject-matter specialists have a role in assisting extension professionals in planning county programs. In this respect Pesson (1966) says:

Specialists serve advantageously as advisors to agents in planning for studies of the situation once the facts are collected. They can bring facts and trends from state, national, and international situations to the planning process.

There is another term in extension program planning, which sometimes is used synonymously with need. It is interest.
a special report of the Minnesota Extension Service (1973) as follows:

To activate learner motivation the extension staff member must know the individual and group, and must gear programs to interests and the stage of development of people in a particular area of program content.

In emphasizing the importance of needs and interests in planning adult education programs, London (1960) says:

Because adults do not have to go to school, but undertake adult education courses voluntarily, programs must be based on needs and interests which these students themselves express or which they can be led to recognize.

Another aspect that is associated with the terms, needs and interests is motivation, which could be thought of as a catalyst that impels people to act in achieving some objective. Extension professionals have the challenge of finding and providing situations to capture the person's positive motivations.

It is a common error to assume that extension's clientele needs are essentially of an economic nature. Herzberg et al. (1959) identified the satisfiers and dissatisfiers which affect people's jobs. They found that if the motivational forces are placed on a continuum from low (maintenance) to high (motivators), salary and wages are found to be maintenance factors. Those factors that motivate people are: opportunity to achieve, improved working facilities, and recognition.

After identifying the needs of people, through the study of the situation, extension program planners must determine the priorities that are going to be established to meet those needs.

According to Webster's Dictionary (1974), a priority is:

Something given first attention or
The state of being first in time, rank, etc.
The priority-setting in extension programs is a complex professional responsibility, which involves a process of different decisions to respond to the problems of the target clientele of extension.

In the concept of Forest and Mulcahy (1976), priority setting in extension is:

A dynamic process of deciding what goals or actions are most important now, and a commitment of self and resources to that decision.

In priority setting decisions are made about what is most urgent and critical, and the main factors in a thoughtful decision are the same, whether the matter to be decided on is trivial or very important.

The same authors mention that making decisions in priority setting involves the following points:

1. Understanding the priority setting situation.
2. Purpose or goal to be achieved.
3. Available alternatives to achieve the purpose or goal.
4. Probably consequences of each alternative.
5. Values to the decision maker of these probably consequences.

The extension professionals have four main sources from which they may obtain the information necessary to make decisions about program priorities. These sources according to Forest and Mulcahy (1976) are:

1. The community(s) or society at large.
2. Specific clientele or interest groups.
3. The Extension organization.
4. Self (one’s own values, interests and concerns)

These four sources are closely related to the work that extension professionals are doing every day, and, therefore, provide them with a direct perception of the problems and alternatives to solve them.
Sometimes the pressures from the first three sources, over the professional's self-perception of the situation, may impose a different scale of priorities, but with the cooperation of the local leaders on planning committees, a more accurate assessment of the situation is made in making the final decision.

Boone (1978) emphasizes the above concept, when he states:

Extension workers -- as planners and implementers -- need the broad picture of the philosophy, the purposes, the concepts, the processes and techniques of programming. Moreover, they need a working understanding of the concepts, theories, and principles found useful in the behavioral sciences to explain the situations with which they deal and to guide their decisions throughout the planning process.

The Cooperative Extension Service, as any other formal organization, must have objectives which the organization strives to reach. The extent to which the extension service is able to reach its objectives is the measure to assess its effectiveness. Clearly defined objectives are specially important in an organization such as extension, where so much labor and management come from volunteer sources. The words "objectives", "ends" and "goals" have been used interchangeably by different authors; however, they appear to have different meanings.

Macfie cited by Vincent (1953), suggests that an "end" is:

Some experience which is at once self contained and satisfied, or an experience which is good in itself.

Obviously, many of the objectives of extension are not ends in this sense, but means to other objectives.

In dealing with this aspect, Vincent (1953) differentiates between both terms with the use of the following example, which in the concept of this author is acceptable to clarify them:
... some would prefer to call "increasing family income" an objective, and the more ultimate or remote "increasing happiness" an end.

For the purposes of this study, both terms are acceptable and the distinction between them does not seem to make any difference in regard to the extension programs. However, in order to maintain consistency in this study, only the term "objectives" will be used.

In regard to the term "goals", they have been identified in economical language as "quantifiable objectives" or those objectives which may be measured in numerical terms.

The Minnesota Extension Service (1973) special report on program development makes the following statements on "goals" and "objectives":

- Goals emerge out of activity of an individual in his need to adjust. They emerge from tension and become goals only when the person decides to do something about it.
- Goals point direction, specify serious intent and describe end results anticipated.
- The word objectives is used to refer to the end state or direction identified by the organization and/or individual educator.

In this case both terms have similar connotations. Therefore, the same remark made in regard to "objectives" and "ends", may be applied in the case of "goals" and "objectives" and only the term "objectives" will be used in this study.

Reinforcing the importance of the objectives for extension programs, the previously mentioned Minnesota Extension Service Special Report (1973) points out:

Without objectives there is no sound basis for selecting program content, materials, or methods, and as a result, it becomes difficult or impossible to do measurement or evaluation of results.
Planned educational programs are based on objectives. In this regard Tyler (1950) says:

... these educational objectives become the criteria by which materials are selected, content is outlined, instructional procedures are developed and tests and examinations are prepared.

Pesson (1966) states:

In Extension work, educational objectives are developed generally after a careful analysis of the situation. Local problems, identified in cooperation with advisory groups of representative local people constitute the deficiencies which must be corrected. Through this process Extension staff units identify what they must teach and the changes which they must help people to achieve.

Depending upon the stage of the program development process, objectives have varying degrees of specificity.

Krathwohl (1965) speaks of three levels of objectives:

1. The general level of objectives is more relevant to program planning.
2. The intermediate level to curriculum development, and
3. The most specific level to instructional material development.

In regard to the extension service general objectives, Smith and Wilson (1930) commented:

The end sought is a more efficient and profitable agriculture and adequate supply of food and clothing for a nation, a wholesome rural life and an intelligent, alert and progressive rural people.

In extension program development a complex mix of individuals and groups are involved in the process of determining program objectives. They are: the extension staff members, the potential clientele, the contemporary society, and the extension specialists.

Tyler, cited by the Minnesota Extension Service (1973) Special Report - Program Development Process (1973), provides reference for the basic areas from which objectives may be formulated:
1. Studies of the potential Extension audience. These studies will identify the learner's educational needs and goals and describe his environment which will provide the necessary basis for identification and formulation of more specific objectives.... Objectives can be stated clearly only when information about the present state of the learners and the desired state of those learners can be identified.

2. Studies of the contemporary life, or the societal situation. Certain societal concerns may be broad in nature and not of immediate concern to individual learners. Current examples might be some aspects of environmental education, the energy crisis, world trade of agriculture.... It is the task of the Extension worker to get information and to get clientele involved in program determination about those aspects of contemporary life which are likely to have implications for educational objectives. Community studies and long range planning are inputs into this process.

3. Suggestions from subject matter specialists. This is a source of objectives most commonly used in typical schools and colleges.... Subject matter specialists can provide a large share of information needed to determine alternatives and potentials in their particular subject matter field.... Using subject matter specialists in determining objectives provides a sound basis for subject matter content and direction. Inferences must be drawn from this as to the contribution that particular subject matter specialists may make to the overall program effort and expressed needs of clientele.

In addition to the above sources of objectives as drawn from Tyler, another consideration is significant in extension program development. This will be stated in terms of extension's response to administrative concerns. According to the Minnesota Extension Service (1973) Special Report on Program Development Process, these areas may be summarized as follows:

Extension organization as a leader in effecting change is locked upon by the University, counties, the state and the national governments, cooperating institutions and agencies, for specific program effort.... Administrative response to these forces may be a major input into determining some program objectives. Extension administration is charged with evaluating the total needs surfaced by all staff units and clientele groups. These must be placed in perspective and decisions made as to allocation of scarce resources
among the competing demands. One major problem in this regard is that staff and subject matter competences are relatively fixed....

Tyler (1950), identifies three requirements in the development of any curriculum. In that respect, he says:

Society, learner, and subject matter are combined to produce educational objectives.

Pesson (1965), refers to the extension objectives as representing a forecast of the changes in behavior and changes in the situation to be expected in the future. He states:

Such objectives become guiding beacons by which Extension staff in its organization employ their resources in conducting educational programs for the benefit of people on the larger society.

Duft (1969) states:

... objectives and plans would grow out of a consideration of (1) clientele abilities and needs; (2) subject matter; (3) the social and economic milieu in which the clientele live and (4) institutional policies and procedures.

The objectives of an organization must be flexible enough to allow for certain changes when they are considered necessary. In such a respect, Drucker (1954) points out:

Of course objectives are not a rail-road time-table. They can be compared to the compass bearing by which a ship navigates. The compass bearing itself is firm, pointing in a straight line toward the desired port. But in actual navigation the ship will veer off its course for many miles to avoid a storm.... And without a compass bearing the ship would neither be able to find the port nor be able to estimate the time it will take to get there.... Similarly, to reach objectives, detours may have to be made around obstacles.

Heady (1952) pointed out about the extension objectives:

The end here is not one as many extension workers suppose, of "establishing goals for farm people" but of providing more complete information so that families can better formulate their own scale of values.
Vincent (1953), supports Heady's view when he says:

... the task of the extension worker is to assist in the delineation of goals rather than deliberate molding of individual values.

One aspect that is closely linked to the extension objectives' determination is the decision-making process, through which needs and problems are identified and priorities are set.

According to Albers (1969), decision making may be narrowly defined as:

The making of a choice from among alternative courses of action.... Decision making also involves all of the actions that must take place before a final choice can be made.

Simon (1960) lists four phases of managerial activity which account for most of what executives do:

1. Finding occasions for making a decision.
2. Finding possible courses of action.
3. Choosing among alternative courses of action.
4. Carrying out the action decided on.

Christensen (1968) believes that knowledge of the decision making process is important for extension professionals. In this respect he states:

Understanding the principles of decision-making -- specially executive decision making -- should enhance our effectiveness as Extension workers and specialists. Extension personnel constantly work with decision makers, including executives of agribusiness firms. We can be more effective teachers and specialists if we understand the nature and principles of decision making.

In regard to the executive decisions mentioned by the former author, Hodgetts (1975), points out that they are "organizational decisions".
Further, he adds:

The adoption of strategies, the setting of objectives and the approval of plans constitute only a few of these.

Naturally, many of the decisions that need to be made throughout the extension program development, are made jointly by the extension professionals and the local volunteer committees as all of them are responsible for the programs. However, several individual decisions must be made by the extension staff members in their work, particularly when they occupy positions in which they have to direct other people's work.

The decision-making process is based upon five steps although some authors, like Haimann and Hilgert (1977) and Hodgetts (1975), consider seven steps in the process. The decision-making process, according to the special report of the Minnesota Extension Service (1973) includes the following steps:

1. **Defining the problem**: this is usually done through surveys, statistics, and meetings.

2. **Information gathering**: through surveys, discussion and research.

3. **Listing alternatives**: this step is done through discussion and testing of implications.

4. **Making decisions**: by obtaining consensus, voting, and reporting.

5. **Action implementation**: through work groups, advisory committee, and individual commitment.

The same Special Report (1973) states:

Extension staff will use several of the approaches to involve people. The method may vary according to the nature of the clientele or the general nature of their problems...

With respect to the problem identification, Pesson (1966) believes that specialists are key people in that work. He states:

In extension work one of the traditional functions of the subject-matter specialists has been to serve as the link between the
researcher and the agent, with the primary mission of keeping the agent updated on the latest technology. Too often the specialist has been overlooked in planning. By his experience, accurate standards, technologically speaking, can be pinpointed and new knowledge can be brought into focus in the planning process. The specialist can also be effectively utilized in problem identification. In some cases the problem approach requires diagnostic procedures and expertise that is beyond the agent...

Some writers make considerations in relation to the decisions which are made by a group of people; Haiman and Hilgert (1977) share this point of view as follows:

...if a group makes a decision, they probably will reach a solution which will be accepted by the group. Even if the group's solution is only adequate and not necessarily the best, it may be better to have an adequate solution that is implemented by the group with enthusiasm than to have a supervisory decision that meets with their resistance.

Whale and Boyle (1966), doubt the total effectiveness of decisions reached by a group. In this regard they say:

Decisions reached by groups may also not be completely rational if those involved are concerned with their individual or the group's status. Decisions may be influenced more by the desire to arrive at a choice among alternatives judged to move the group more expeditiously toward its stated objectives....

Furthermore they state:

Emotion appears to have significant bearing on decision making where either personal attraction or group prestige, or both, are bases for group cohesiveness....

Beal, Bohlen and Raudabaugh (1972), state in regard to group effectiveness:

People and groups usually are more productive when their efforts are directed toward well-defined goals and objectives.... A little time spent by groups in defining their goals and objectives can do much to give a group direction and purpose, and to increase their quality and efficiency of achievement.
Boyle (1965), states in regard to the decision making process in extension:

The approach of the Extension service to program development has progressed through several stages until it has become a highly complex and involved decision-making process. Today problems and opportunities for program emphasis which must be identified by Extension workers and local participants, must be based on scientific and technical facts and trends obtained from research, public documents, field surveys and other pertinent resources.

The decision making process is important not just for extension professionals but also for their clientele whose agricultural operations are based, in many cases, upon the information provided to them by the extension personnel.

McIntyre (1965), has pointed out in relation to this:

There exists ample evidence that client decision making is becoming more complex. For example cooperative extension is constantly confronted with problems arising from the growing complexity of the larger scale agricultural enterprises that have to be managed. Also as increasing competition confront each agricultural operation from across existing environment frontiers -- whether be geographic, economic or social in nature -- the information requirements of these enterprises are substantially increased.

Afterward, McIntyre concludes:

In fact, it would not seem unlikely that the most critical constraint affecting the future of our agricultural economy will be our ability to effectively communicate pertinent decision-making information to those in need of it.

Some of the general objectives of the agricultural programs of the Cooperative Extension Service, presented by York (1966) in the Guide to Extension Programs for the Future, are these:

1. Emphasize efficiency of production, but not necessarily increased production, as a foremost objective.

2. Improve and expand methods of dealing with the farm as a unit, recognizing that the unit may be changing both in size and in character.
3. Help farmers in using services of governmental and private agencies in farm planning and operation.
4. Assist farmers in their efforts to adjust production to demand.
5. Make wider use of demonstration, mass media, subject-matter conferences, and individual assistance.
6. Expand its educational activities with general organizations of farmers, homemakers, and youth and with community groups.
7. Work with all the groups concerned with the business of agricultural production.
8. Obtain the maximum return from expenditures made in the marketing of farm products.
9. Help farmers to obtain an expanded market for farm products.
10. Help farmers to acquire a better general understanding of the marketing process.
11. Help people to identify natural resources.
12. Help people to recognize problems of resource management.
13. Help people to become skilled in individual resource management.
14. Help to develop principles and effective systems of land zoning.
15. To assist in reassigning lands to best agricultural use (crops, forest, grazing) on the basis of potential performance and permanent stability.
16. To organize and teach systems of soil management.
17. To assist individual farmers and such local organizations as soil- and water-conservation districts and watershed areas in developing and carrying out soil- and water-conservation programs.
18. To assist farmers in identifying and clarifying farm management problems.
19. To suggest solutions in the light of resources, technology and skills available.

According to Lawrence (1974), the Plan of Work is:

A written outline of strategy for one year or less, for each problem or concern included in a program, that sets forth in an integrated and coordinated manner the following elements: 1) educational, operation and/or organizational objectives to be achieved; 2) Learning experiences, activities, events, and/or situations to be undertaken, calendarized, and related to appropriate objectives; 3) Evidence of accomplishment, kind of and calendar for evaluation; 4) time to be devoted to each activity, event, and/or learning situation; 5) who will assume and support leadership responsibilities; and 6) coordination internal and external.
In other words, the plan of work is the written statement of the situation or problems that need to be solved, the objectives that are going to be accomplished in order to solve the problems, the specific audience to which the educational programs are going to reach, the activities and teaching methods through which the objectives will be accomplished, the resources that will be used, including personnel and time, and the evaluation of the accomplishments.

The plan of work form must be completed by every extension staff member who has any kind of responsibility within a program. Also, as Slaybaugh (1967), points out:

One person or more than one person (e.g., area, department) may be represented on a single Plan of Work form.

The plan of work form provides input from the different administrative levels of the Iowa Extension Service (county, area, state) to a computer-assisted management information system called SEMIS (State Extension Management Information System), through which all of the state data are reported to the Federal Extension Service at Washington.

According to Slaybaugh (1967):

The Plan of Work data is the information on the basis of which Iowa Cooperative Extension Service's Federal allocations are determined.

In summary, the three basic stages of the Extension Program Development process, namely, Planning, Implementation and Evaluation, are included in the Plan of Work.

Program Implementation

Implementing the program is the action associated with the educational tasks outlined in the plan of work. Subject-matter and
educational methodology must be carefully decided on by directors, specialists and others involved in educational activities to assure a proper setting for learning to take place.

According to the Program Development Task Force Report (1976), the objective of the program implementation process is:

To initiate and carry out the planned strategies included in each plan of work component directed toward the accomplishment of program objectives.

Moreover, the mentioned report presents the following dimensions of the implementation process:

a. Prepare detailed plans for learning experiences, activities, and/or events in each plan or work component including the more specific organizational, operational and/or teaching level educational objectives.

b. Select specific content or subject matter and methods to be used.

c. Collect and/or prepare educational and other materials to be used.

d. Conduct activities, events, and/or learning experiences using appropriate techniques and with coordination and efficient utilization of resources.

e. Evaluate the processes used to carry out the planned activities.

f. Re-evaluate and update plan or work components based on the changing situation; amend the plan or work component and report changes in the management information system.

It is important for the people responsible for implementation of the educational plans that the learning experience itself must start and end with the learner.

With respect to the learning experience, Tyler (1950) says:

The term learning experience refers to the interaction between the learner and the external conditions in the environment to which he can react. Learning takes place through the active behavior of the student; it is through what he does that he learns, not what the teacher does.
Afterward, he concludes:

The essential means of education are the meaningful experiences provided, not the things to which the student is exposed.

The extension service has at its disposal several teaching methods to provide information to its clientele, but naturally, the application of each one will depend on several factors such as, the specific audience, the subject-matter to be taught, the number of people to be taught, the available resources and the teaching aids. No matter what method is selected for a particular case, the ability of the extension personnel responsible for presenting the information to the clientele is definitive in the final outcomes.

One of the most common educational methods used by extension to present information to its clientele is the demonstration method. Apparently the use of this method by the extension agents during past years is based upon the Smith-Lever Act of 1914, which, according to Sanders (1966), states in part that:

... cooperative agricultural extension work shall consist of the giving of instruction and practical demonstrations in agriculture and home economics.

Sanders (1966), comments in regard to this aspect of the Smith-Lever Act:

It should be kept in mind that the original sponsors of this legislation were well acquainted with and quite enthusiastic about the farm demonstration program that was being conducted in the South....

In regard to the demonstration method in extension, Bailey (1964), points out:

Two kinds of demonstrations have been used:
1. The result demonstration, in which the farmer carries out a new practice under the direction of the agricultural agent. (Emphasis is on the practical results).

2. The method demonstration, in which an audience watches a leader carry out a task such as using a new type milking machine or preparing meat for the freezer. (Emphasis is "how-to-do" of skills).

Bailey (1964), also mentions that:

... mass communication sources (such as radio, publications, and various change agencies) have their greatest influence on adoption leaders and during the initial stages of the adoption process.

Swoboda (1968) considers that communication is a very important part of an organization. In this regard he says:

Effective communication is vital to the success of every organization regardless of size. If the organization is to function properly and carry out its objectives, effective communication channels must be established....

Further, he states:

Because of the large numbers of people with which the Cooperative Extension Service deals and because of the vast amount of information that is being produced, Extension is constantly trying to find new methods of increasing the effectiveness of its communication.

The need to reach larger audiences has influenced extension personnel to resort to mass communication systems more often, especially television, radio, and newspaper media. In a study carried out in Ohio in regard to the use of the television stations by Extension agriculture and home economics programs, Jones (1962) presented the following recommendations in accordance with the outcomes obtained:

1. An annual workshop on a state university campus on an option basis using the best qualified instructors from all areas of the university and elsewhere.

2. An annual or semiannual workshop in the studios of the stations concerned, for county agents and other staff members involved in regular programming on television.
3. Prospective Extension workers and present staff members enrolled in graduate work be encouraged to take courses in television writing, editing, production presentation methods and other techniques.

Medved (1966), discussed her point of view on the use of television as a teaching tool:

Television's rapid development since 1948 has stimulated widespread interest in the use of this medium as a teaching tool. However, its potential for transmitting Extension Service information has not been fully realized by many Extension personnel.

Although the traditional "face to face" teaching methods have limitations in reaching larger audiences, apparently they are effective in regard to the necessary interchange between the teacher and the learner, since they provide for "learner feedback", as an essential component of the teaching-learning process. Probably this is the reason for the demonstration method which seems to be one of the best for the extension agents in accomplishing their objectives.

However, there are some factors which condition the effectiveness of this method. According to Bailey (1964), these factors may be divided into four categories, as follows:

1. Characteristics of the demonstration
2. Characteristics of the demonstrators.
3. Characteristics of the audience.
4. Characteristic of the community or the total social milieu in which the demonstration takes place.

The technical knowledge of extension professionals as well as their knowledge of their audiences and teaching methods, are the most reliable tools they have on hand to decide on what method, or combination of methods, to utilize in a particular case.
Sanders, cited by the Minnesota Extension Service (1973) Special Report - Program Development Process, identifies a number of methods that may be used by extension workers in teaching their clientele. He has listed these methods in four categories, based on the establishment of learning experiences. The Sander's list includes:

a. Learning experiences designed primarily to contact persons individually:
   1) Visit 2) Office call 3) Telephone call

b. Learning experiences designed primarily to contact persons in groups:
   1) Result demonstration 2) Methods demonstration 3) Meeting
   4) Tour 5) Field day 6) Workshop 7) Clinic 8) Short-course

c. Learning experiences to reach masses of people:

d. Learning experiences provided through aids to Extension education:
   1) Organizations to work with and through (examples)
      a. Extension homemaker groups
      b. 4-H clubs
      c. Farm management associations
      d. Dairy Herd Improvement Association
      e. Non-Extension Organizations
      f. Community Development Association
   2) Visual Aids
   3) Voluntary Local Leaders
   4) Program Assistants
   5) Approaches involving a combination of Learning Experiences.
      As examples:
      a. Community Resources Development
      b. Camping.
Moreover, the Minnesota Extension Service (1973) special report mentions:

Sanders does not, nor do many other authors, adequately define each of these possible methods or as he describes it, learning experiences. Definitions tend to be somewhat individualistic and unique. However, the list does indicate the large number of possibilities open in the establishing of learning experiences.

Program evaluation

Evaluation is the final stage of the program development process. Through evaluation it should be possible to determine the extent to which the outcomes are congruent with the objectives that were established.

In regard to the working definition of evaluation, Iverson (1973) presents it in this manner:

Evaluation is a process of making observations (gathering information), comparing the findings with standards and then making judgments about a situation, process or product.

The former definition of evaluation indicates that it is the beginning and the end of the program development process and it is extensively used at all points in between. In fact, Iverson (1973) further adds:

Most Extension educators evaluate extensively when program planning; when developing a plan of work; when and after carrying out each activity in the plan or work; and after completing a major program effort. If the facts were truly known, each of us likely spends as much time doing evaluation as we spend in any other phase of program development... possibly more.

Tyler (1950), defined evaluation as the process for determining the value of anything. In education this is determining the value of an educational program. Some of the basic notions regarding educational evaluation, developed by Tyler, may be applied to extension evaluation.
In such a respect, Sabrosky (1965), comments:

a. The process of educational evaluation is essentially the process for determining behavior or the people being taught;

b. Since educational objectives aimed at are to produce certain desirable changes in the behavior patterns of the learner, then evaluation is the process for determining the degree to which these changes in behavior are actually taking place. The Extension Service is concerned with the changes that can be brought about in the people it works with.

Generally speaking, the evaluation stage is supposed to accomplish three purposes in the program development process: 1. To determine what happened as a consequence of an educational program. 2) To improve future programs, through a careful analysis and measurement of the current programs. 3. Accountability; Extension is an institution supported by Federal, State and County funds; therefore, its activities and outcomes must be evaluated in order for their supporters to know how their finances have been used.

On the other hand, the educational and technological programs provide for increased agricultural production along with credit, machinery, and labor. All of them, working together, will influence the efficiency of the agricultural systems and increase yields. But undoubtedly, extension programs are teaching farmers how to, wisely, use the other inputs in order for them to improve their systems and increase their crop yields. Therefore, the changes that extension programs are producing in the behavior of their clientele, are another way for those programs to be evaluated.

The following information by Vincent (1953) is meaningful for extension when considering increase of the agricultural efficiency:
An extension program directed toward increasing agricultural efficiency should do the following things:

1. reduce uncertainty faced by farm operators;
2. assist in the transfer of "under employed" resources in agriculture to other industries;
3. recognize that knowledge may be complementary with capital and that new measures may be necessary to facilitate the application of modern techniques and ideas;
4. assist in the removal of resource misallocations on low-income farms.

Afterward, he continues saying:

Farmers (as well as all individuals) must make decisions in a world of change and imperfect knowledge. The decisions made and actions taken must take place without knowledge as to the consequences. This uncertainty has a vital influence on resource use. Without perfect knowledge, errors of judgment are inevitable and the cost of these errors are born not only by the individual producer but by the remainder of society as well. Hence the reduction of uncertainty through education has important economic and welfare implications....

Logically, in order for extension programs to be adequate in helping farmers to avoid uncertainty, they need to be planned and updated according to the world's changing circumstances. The only way to keep the extension programs updated is through frequent and reliable evaluation.

One of the ultimate objectives that extension programs are expected to achieve is to influence the so-called KASA (Knowledge, Attitudes, Skills and Aspirations) changes of extension clientele. In regard to these changes Bennet (1976) comments:

"Practice Change" (adoption) refers to individual or collective application of acquired knowledge, attitudes, skills, and aspirations to work or life styles. But practices are not usually adopted for their own sake; certain benefits are anticipated to accrue from individual and collective practices. Whatever benefits and consequences follow from the practices may be called "End Results". These results, hopefully, include attainment of the ultimate objective(s) of Extension programs.
Extension professionals may determine the extent to which the KASA changes have taken place through evaluation of the programs. In this exercise they compare the learner's initial stage of knowledge, attitudes, skills and aspirations, with those conditions after the educational activity has taken place. However, the outcomes are not always observed immediately after the educational activity has been completed. Therefore, it is necessary for the extension professionals to follow up their clientele for a period of time to finally determine whether the expected changes have taken place. This kind of evaluation is more difficult to carry out since it requires considerable time and effort. An agency that works with limited resources and many different problems to solve, can not always afford to devote the time of its technical people to this kind of evaluation.

Boyle, cited by Iverson (1973), has diagrammed a continuum, where the various degrees of evaluation are displayed:

|-----------------------------|-------------------------|-----------------------------------|--------------------------|---------------|

In the concept of Iverson (1973), almost all extension workers regularly operate at "casual everyday observations" and "systematic observations" levels, and yet, most of the same people feel that evaluation is something that requires an expert or research type person.
Perhaps the above concept relates the tendency of some extension workers to avoid very complicated evaluation systems since they think that they do not have the necessary required knowledge and skills. This situation may be overcome through in-service training or graduate courses available for them.

On his part, Boyle and Jahns (1970) believe that the following reasons are the ones that mostly influence the extension personnel to neglect evaluation:

1. Ends and objectives have not been identified in the program.
2. Achievement of the stated objectives if identified and stated are such that they cannot be measured or analyzed.
3. Extension administration really does not want staff to "waste" time on evaluation.
4. Negligible results may bring criticism to the Extension worker or planning unit that organizes the program.

People should realize that the effectiveness of extension programs may be measured in terms of the accomplishment of their objectives, no matter who is going to be held responsible for their results, and the objectives should be clearly established in measurable terms. In the long run, the effectiveness of the programs may also be a good standard to measure the efficiency of the people managing them.

Extension Effectiveness and Interagency Coordination

In order to accomplish its objectives, extension must function with other federal, state and local agencies. Governmental agencies with which extension has relations perform a wide variety of kinds of work, such as administration, research, education, regulation and service.
In the relationships of extension with other agencies, certain principles seem to be necessary for those relations to be harmonious and effective. Kelsey (1955) thinks that at least six principles must govern those relationships. They are:

1. Full and mutual understanding of the objectives and organization of the programs and unity of purpose of the administrative and operating personnel at all levels. Serving the public welfare should be the aim.

2. Acceptance by each participant in a cooperative arrangement of the responsibility for making the joint program workable and effective.

3. Constant appraisal of the objectives and programs of the organizations to see that they are following the pattern for which they were created.

4. Maintenance by each participant of a sincere attitude and a willingness to develop plans for cooperative action with other organizations without relinquishing his own responsibilities.

5. Adequate interpretation and reporting of activities to cooperating and sponsoring groups and to the general public.

6. Mutual acquaintance of personnel to promote understanding.

The above principles seem to be ideal for mutual cooperation and understanding among agencies responsible for managing similar programs. However, taken into account that organizations are managed by people, not by principles, they are not applicable in every circumstance, especially when the people representing every organization may have a personal idea of that cooperation.

Moreover, the effectiveness of an agency is determined not only in terms of its internal organization and efficiency, but also in terms of its recognition by the clientele it works with, which may create competition with other agencies.

In the concept of Mulford et al. (1977) there are four categories through which it is possible to determine the efficiency of an
organization. The same criteria can serve as a basis for obtaining evidence of accountability. These categories are:

1. **Organizational Health**: it exists when staff members are motivated, satisfied, and like the climate of their work unit...

2. **Public support data**: they tell us how actual and potential clientele, knowledgeable, and others compare this agency with others.

3. **Inputs to program development**: includes data that may be obtained from advisory committees, councils and other support groups....

4. **Productivity**: its evidence includes: how well are we doing in implementing programs, and to what degree are we attaining our goals. Also efficiency (inputs/outputs) can be determined.

The second category mentioned by this author is perhaps the one that creates more obstacles to effective interagency coordination, particularly when the program objectives and target clientele are quite similar. In this point the human relations, leadership ability, and sense of mutual understanding of the respective local leaders plan a definitive role in assuring that the principles mentioned by Kelsey (1955) are applied.

Mulford et al. (1977) further states:

> An organization does not exist as an island, instead there is an interrelationship between the organization and its environment. The relationship between the organization and its environment, including competition with other organizations for resources and modifications or organizational functioning in response to environmental changes may be referred to as adaptability....

Cooperation of extension with commercial agencies, may be highly productive when measured with the final objectives of the program. Maunder (1972) states in this respect:

> Commercial agencies are highly competitive among themselves and with cooperative associations. This results in reasonable costs for the farmer. In addition commercial firms and cooperative associations are furnishing increasing amounts of technical advices. Seed companies, dealers in fertilizers and farm machinery often employ highly...
trained field men to assist their customers in the proper use of their product and advise them on related problems.... The Extension administration must take into account the existence of such services in organizing and operating the Extension Service.

Undoubtedly, the cooperation of the Extension Service, whose objectives are non-profit oriented and whose resources are sometimes limited, with the commercial firms, may be useful for the purposes of both organizations. The terms and system through which cooperation will take place, must be cautiously determined in order to avoid a confusion of the objectives. Cooperation must be unbiased and open to every organization which is in harmony with the extension objectives.
The main objective of this study was to determine the experiences of selected members of the Iowa Cooperative Extension Service, in regard to some factors related to the development of county agricultural extension programs, through its planning, implementation and evaluation phases.

The present chapter has been divided into five subheadings: Research Method Used, Development of the Questionnaire, Selection of the Target Population, Selection of the Sample, and Collection of Data.

Research Method Used

This is an exploratory study, in which the research method used is called case study.

In the concept of Katz (1953):

The exploratory study attempts to see what is there rather than to predict the relationships that will be found... from its findings may come knowledge about important relationships between variables.

The present study has attempted to obtain an insight into some of the aspects related to the process through which the Iowa Extension Service accomplishes its functions. The case study method has been selected to achieve this objective because it allows a higher flexibility in the exploration of single situations.

The case study as a method of research is not new; it has been used for a long time and is still extensively used by researchers for studies involving the collection of qualitative evidence, in different disciplines, such as: Psychology, Psychiatry, Sociology, Education, Urban Planning, and Management.
In regard to the case study procedure, Good and Scates (1954) state:

The essential procedure of the case study method is to take account of all pertinent aspects of one thing or situation employing as the unit for study an individual, an institution, or community, or any group considered as a unit.

Sax (1968) defined case study as:

Any relatively detailed description and analysis of a single person, event, institution, or community.

Gee (1950) indicated that:

The case study method emphasizes the total situation or combination of factors, the description of the process or sequence of events in which behavior occurs.

On his part, Best (1959) stated that:

The case study is concerned with everything that is significant in the history or development of the case.

In the concept of Newman and Oliver (1970):

In general case studies are investigations of single institutions, decisions, situations or individuals. The object is to gather detailed information about a relatively small class of phenomena, such as the growth of a corporation, the decision to enter World War I.... The implicit assumption is that examination of a limited incident will yield conclusions that may be validly applied to a more general class of such incidents.

However, Stake (1978), disagrees with the above concept of Newman when he states:

The purpose of case studies is to identify significant humanistic factors between cases without any attempt to generalize to a population as a whole.

This researcher thinks that if the subjects or groups under study have certain conditions of similarity, and the procedure through which the data are collected is controlled, and uniform, generalizations of the findings could be cautiously made to individuals or groups similar to those that have been studied. Although this study does not attempt to
generalize its findings to other counties of Iowa, it has been carried
out assuming that the conditions or work, personnel, resources, as well
as the philosophical framework of the Extension Service are similar for
the different counties of the state.

In dealing with the individual information that may be obtained
through the case study method, Barr, Davis and Johnson (1953), stated:

Case study is potentially the most valuable method known for obtain­
ing a true and comprehensive picture of individuality.

Afterward, they said:

It makes possible a synthesis of many different types of data and
may include the effects of many elusive personal factors in draw­
ing educational inferences. It seeks to reveal processes and the
interrelationship among factors that condition these processes.
Initial concepts in new fields of science frequently result from the
analysis of individual cases.

According to Gopal (1970), through the case study it is possible to
examine the complex situation and combination of factors involved in a
given situation so as to identify the causal factors operating.

Cicourel (1964), discussed the use of case study as applied to field
research in the following manner:

Field research provides an excellent setting both for using and test­
ing basic theory and for the study of how such theory enters into
our knowledge of substantive areas.

As a research method, the case study has some advantages, which
have been mentioned by some authors in the research field.

Bernard (1928), stated about some of these advantages:

A case description is, if accurate, always a true record of what
occurs, while statistical generalization, except in those instances
when all included cases are identified, is only an abstract approxi­
mation. Definiteness and concreteness of detail must in some degree
be sacrificed to the more inclusive view of the statistical generali­
zation.
McKinney (1957), commented on the advantage of the case study method
in retaining the integrity of the whole unit under study:

The study of cases is an essential aspect of enquiry and is pre-
liminary to the formulation of types and generalizations. The
case study is a way of ordering social data with the view toward
preserving the unitary character of whatever is being studied.

On his part, Stouffer (1962) stated:

Although the trend is to replace many case-study operations by
quantitative techniques easy to administer, especially when pre-
dictions must be made quickly for a larger number of individuals,
the case study is likely to continue to be a useful-often-indispens-
able-supplement to the work of the statistician, even in situations
where the value of the statistician's methods is most obvious.

Stouffer (1962) further stated:

If case method were not effective, life insurance companies hardly
would use it as they do in supplementing their actuarial tables by
a medical examination of the applicant in order to narrow their
risks. Its great virtue in direct prediction is its flexibility,
permitting an intensive study of the configuration of selected
factors in a time setting.

Blumer (1959) pointed out that research results should reflect
reality. In that respect he stated:

Reality exists in the empirical world and not in the methods used to
study that world; it is to be discovered in the examination of that
world and not in the analysis or elaboration of the methods used
to study that world.

Gopal (1970), conceptualized about the success of the case study
method in the following terms:

... adequate and well-balanced records, of which the first ingre-
dient is accuracy and objectivity.... A second component is con-
ciseness and clarity which depend on the attention paid to the
selection of data.... A third ingredient is the method of recording,
which should be easy of reference, uniform, and up-to-date....
Jahonda et al. (1951) stated in regard to the importance of the case study method in formulating hypotheses for research:

Scientists who have worked in relatively unformulated areas, where there is little experience to serve as a guide, have found the case study approach to be a particular fruitful method for stimulating insights and suggesting hypotheses for research.

Also, in regard to the analysis of interinstitutional work, the case study may be appropriate. In such a respect, Gopal (1970), pointed out:

This tool appears specially useful in an underdeveloped country where varied social institutions interact mutually.

Comparing case studies and statistical studies, Gopal (1970) said that they can be complementary at three levels:

First, in the choice of the units for case study. Preliminary statistical studies perhaps in the nature of a pilot survey may guide the selection of units for detailed case study. Secondly, a prior case study may help the statistician in developing the final questionnaire which is necessarily selective both in the sample and in the problem.... Finally the analysis and processing of the material has to be treated statistically to confirm or reject the hypothesis, and to determine the more precise correlation.

In the same respect, Stouffer (1962) stated:

The statistician and the case investigator can make mutual gains if they will quit quarreling with each other and begin borrowing from each other.

Naturally, the case study method as any other research procedure presents certain limitations and difficulties to be carried out. According to Sax (1968), some of these limitations and difficulties are:

1. It is difficult to determine which factors, historical or contemporary, are relevant to the phenomenon under investigation.

2. There has been a tendency in research using the case method approach to select convenient cases rather than those which can either yield or test hypotheses.
In the concept of Gopal (1970):

The subjective information may not lend itself to quantitative checks.

And according to Bain (1960):

A single case study can better raise a question that provides an answer.

In regard to the use of the case study method in Extension, the review of literature allowed this investigator to find out some previous works carried out in the field.

Cunningham (1967), used this method to compare different aspects, and discuss concepts and principles related to workshops as teaching methods in Extension. This work focused on why some workshops are successful while others are not. The case analyzed was a particularly successful workshop carried out by the Ohio Cooperative Extension Service directed toward the Improvement of Quality of Instruction.

In another study carried out by Tully (1966), the case study method was used to illustrate the influence of a number of sociological and educational concepts on changes in farming practices. In this study, a group of farmers met once a month during a period of three years with a university group, and in addition held a number of field days. The study presented two points of view: 1. a narration or what happened, and 2. a statement and some elaboration of relevant theoretical ideas and concepts.

Mayo (1966) also used the case study method in a study related to Area Development in order to determine the system of reaching more exacting measurements through more precise ways of describing existing efforts.
This study was an examination of a community and area development program carried out in North Carolina, based upon a suggested form of analysis, and a review of literature on community development.

Development of the Questionnaire

The content of the questionnaire through which the data were collected, was determined by means of several interviews. They were held with a jury of experts in extension. All of them were current members of the Iowa Cooperative Extension Service staff.

In order to select the members of such a jury, the following aspects were taken into consideration:

1. Time of work in the Iowa Cooperative Extension Service. (Minimum fifteen years of work).

2. Position in the extension service. Because of their current or previous positions, they should be aware of the different aspects related to the extension program development.

3. Knowledge of the organization and procedures through which extension programs are carried out at a county level.

According to these characteristics, the jury was composed of five persons, whose time of work in the Iowa Extension Service ranged between eighteen and thirty-five years, and whose current positions were: a. Assistant Director; b. Extension Training Coordinator; c. and d. Area Directors; and e. State Subject-Matter Specialist.

Each member of the jury was sent a letter explaining the objectives and methods of this study, and a request for their cooperation. The letter was signed by the researcher and cosigned by his major professor.
(see Appendix D). They were asked to hold a personal interview with the researcher, which was expected to last approximately one hour, in order to elicit their opinion based on their experience in extension about some aspects related to county extension program development. All of them accepted the request for cooperating with the study, and later on appointments were fixed with them to carry out the interviews.

In order to provide for the maximum accuracy of the information, each interview was tape recorded, which allowed the researcher an opportunity to listen to each interview carefully in order to extrapolate the most relevant aspects. From these interviews, the factors were selected to prepare the first five sections of the questionnaire.

At the end of each interview, by means of a set of 10 cards, each containing one aspect related to the development of formal county agricultural extension programs, using the "Q" sort technique mentioned by Borg (1967), they were asked to: a. determine the clearness of each aspect; b. determine which of them were not relevant to the county extension program development and; c. sort them orderly according to their opinion about their importance within the formal county extension agricultural programs. As a result of the outcomes of this procedure, fourteen factors were included in the last part of the questionnaire.

On the basis of the content summarized from the tapes of the interviews with the jury members plus some aspects taken from the literature review, the questionnaire was developed. It was divided into six sections as follows:

1. The county extension director's profile.
2. Factors related to the county agricultural extension profile.
3. Factors related to the program planning process.
4. Factors related to the program implementation process.
5. Factors related to the program evaluation process.
6. Factors related to the formal agricultural extension programs.

The first five sections of the questionnaire included 46 open-ended questions, although some of them led to yes or no answers, which were linked to the next question.

The final section of the questionnaire included a fourteen-item instrument designed to determine the attitudes of the county extension directors about some factors related to formal agricultural extension programs. Each item was rated through the use of a one-to-five Likert scale of importance with a rating of one being a not-important factor and five a very important one.

The method used to prepare the basic content of the questionnaire, through the interviews of a jury of experts in extension, was adapted from a similar method called the "Critical Incident Technique", developed by Flanagan (1954). The Critical Incident Technique involves studying the performance of a group of individuals by asking another group related to the first one by some aspects of their jobs to describe critical incidents that relate to the performance of the first group.

The rankings of the factors of effectiveness of formal agricultural extension programs, perceived by the county extension directors were compared with the rankings of those factors as perceived by the jury of experts. The analysis of them is presented in tables 3 and 4. The factors identified by the jury of experts are presented as follows:
Selected Factors Related to County Agricultural Programs' Effectiveness

1. Determination of local community needs and interests.
2. Identification of local community problems.
3. Collection and utilization of data for program planning.
4. Reliable sources of information for making decisions on program planning.
5. Program priority determination.
6. Plan of work elaboration in accordance with the local community needs, interests, and problems.
7. Lay person involvement in extension program development.
8. County extension council members' efficiency in their role.
9. County extension council's orientation.
10. County extension council's contribution to program development.
11. Relationship of the county extension director with the county extension council.
12. In-service training courses for county extension directors.
13. County extension director's administrative ability.
14. County extension director's background and experience in extension.
15. Involvement of local community groups in extension program development.
16. Understandings with other local agencies in regard to mutual cooperation.
17. Determination of the most effective communication channels to reach extension's clientele.
18. Subject matter specialists' involvement in program planning, implementation and evaluation.
19. Determination of the most effective teaching methods.
20. People's response to extension programs.
22. Adequate use of time.
23. Program delivery consistent with extension's resources.
24. Program delivery consistent with audience's personal needs.
25. Effective evaluation methods.
26. Evaluation consistent with program objectives.
27. Determination of responsibilities in program evaluation.
28. Use of SEMIS (State Extension Management Information System) in program outcome reports.
29. Clientele follow-up.
30. Aspects considered in evaluating programs.

The list of members of the jury is provided in Appendix A, and the list of the county extension directors in Appendix B of this paper.

Selection of the Target Population

The population of this study was the Iowa county extension directors. They were selected on the basis of the following assumptions:

1. The county extension office is the basic unit of the cooperative extension service.

2. Because of their functions, the county extension directors are the representatives of the state director of extension at the county level. Therefore, they are responsible for orienting the extension activities, supervising the programs, and reporting the extension outcomes to the area directors and to the county extension councils.

3. The county extension directors are responsible for coordinating the public information and public relations aspects of their offices, as
well as coordinating actions and programs with other local government agencies.

4. The county extension directors are knowledgeable of the extension program development process in their respective counties.

Selection of the Sample

The selection of cases to be studied is an important aspect in the case study method. In the concept of Gopal (1970), there are two essential elements in the selection of cases:

First, selection of representative units as far as possible. Secondly... a well defined and carefully selected problem is presumed.... There would, therefore, be necessary circumscribing of the limits of inquiring both in number of cases and type of data.

According to the nature of this study and the procedure that was going to be used to collect the data, the sample was selected following these criteria:

1. Only those extension directors of counties located in Central Iowa would be selected in the sample.

2. In order to determine the counties to be selected in the sample, a list of the counties of Central Iowa, specifically of the Des Moines and Fort Dodge areas, was presented to each member of the jury of experts for them to independently select the five counties that they believed to have the most effective agricultural extension programs.

Afterward the number of votes was tabulated and the five counties that obtained the highest number of votes were selected.

In alphabetical order, the selected counties were: Hamilton, Hardin, Humboldt, Marshall, and Story (see Figure 1).
Fig. 1. Geographical location of the counties included in the study (denoted by X).
Three of them were located in the Des Moines extension area, and the other two in the Fort Dodge extension area.

Collection of Data

After the sample was selected, letters were sent to the extension directors of the counties, explaining the objectives and the method of the study, and asking for their cooperation for an interview with the researcher (see Appendix E). They were told that the interviews would be recorded on tape in order to permit the maximum accuracy. They were assured that neither their names, nor their county names, would be identified in the report with their answers to the questionnaire. This was made in compliance with the Iowa State's regulations on the use of human subjects in research (see Appendix F). The questionnaire was designed in a way that eluded questions about confidential or restricted information that might somehow damage the interviewees or discourage them from participating in the study.

In order to facilitate their performance during the interview, they were sent a copy of the questionnaire that would be utilized along with the letter. This allowed them to review their files in advance for information they might have wanted to use during the interview.

In order to obtain validity in the information collected, the following aspects were taken into account:

a. All the interviews were held privately in the county directors' offices.

b. None of the persons included in the sample were told who the other persons were.
c. All of the interviews were based upon the same questionnaire.

d. All of the interviews were carried out by the same person, the researcher.

e. All of the questions were asked in the same manner, and no intent was made by the researcher of leading their answers in any direction. Just occasional interruptions were made when a further explanation of any answer was needed.

Although the time limitation did not permit a pretest of the interview with a group of people as suggested by Borg (1976), the questionnaire was pretested with two persons that had a background in county extension work in order for them to:

a. determine the clearness of each question;
b. interpret each question according to their understanding of it;
c. suggest modifications of the unclear questions;
d. suggest modifications of the questionnaire structure, as needed.
CHAPTER IV. FINDINGS AND DISCUSSION

In the following pages, information of each individual case obtained through a two-hour interview has been presented. In order to keep the anonymity of the directors interviewed, the presentation of cases has been made in the following manner:

1. Demographic data obtained from questions numbered 1 through 8 of section one of the questionnaire, have been presented in Table 1. Each director was randomly assigned a one digit number from 1 to 5 for identification purposes.

2. Data from questions numbered 9 through 46 have been presented separately for the individual cases. In order to do that, each county was given a pseudonym which is the name of one of the fifty states of the United States. The selected names were: Indiana, Nebraska, Ohio, Texas and Wisconsin.

3. Data included in section six of the questionnaire, with their statistical analysis, were presented in Table 2.

In order to avoid an excessive extension of this paper, the answers of the county extension directors to questions numbered 9 through 46, were presented as follows:

a. Only the most outstanding aspects of each answer, extrapolated from the recordings, were reported in this paper. This was necessary because some of the directors had the tendency to extend their answers adding comments not essential to the content of the question.

b. Each answer was presented using its respective number in the questionnaire, along with some "key words" to identify the question. This
system helped the researcher to avoid repeating the whole question every time.

The entire questionnaire was included in the Appendix C of this paper.

Table 1. Demographic data of the county extension directors (CED)

<table>
<thead>
<tr>
<th>Question number:</th>
<th>CED No. 1</th>
<th>CED No. 2</th>
<th>CED No. 3</th>
<th>CED No. 4</th>
<th>CED No. 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Years in the Iowa Extension Service?</td>
<td>23</td>
<td>22</td>
<td>17</td>
<td>29</td>
<td>18</td>
</tr>
<tr>
<td>2. Previous involvement in extension?</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>3. Kind of previous involvement?</td>
<td>4-H</td>
<td>4-H</td>
<td>4-H</td>
<td>4-H</td>
<td>4-H</td>
</tr>
<tr>
<td>4. Years in current position?</td>
<td>20</td>
<td>13</td>
<td>10</td>
<td>24</td>
<td>16</td>
</tr>
<tr>
<td>5. Last position in extension?</td>
<td>4-H and youth leader</td>
<td>County Extension Assistant</td>
<td>CED in other county</td>
<td>4-H and youth leader</td>
<td>4-H and youth leader</td>
</tr>
<tr>
<td>6. Highest degree?</td>
<td>M.S.</td>
<td>B.S.</td>
<td>M.S.</td>
<td>M.S.</td>
<td>B.S.</td>
</tr>
</tbody>
</table>
Presentation of Cases

Case number 1: Extension Director of Indiana county

Q. 9. Training in administrative management?
I have not had formal training in that area.

Q. 10. Training content?
In my master's program I had a course on Program Planning but not on budgeting, personnel management, etc....

Q. 11. Administration and subject-matter activities?
I would say that I expend approximately 20% of my time in administrative aspects, 80% in subject-matter aspects....

Q. 12. Useful courses for county extension directors?
In my case I think that courses in crop production, animal science, etc.... as Central Iowa counties are mostly oriented toward these areas. We get most of this training through our area specialists. We also require some administrative training such as budgeting, democratic procedures, voting, elections, etc., as we have to deal with these things when working with the county extension councils....

Section Two: Factors Related to the County Agricultural Extension Profile.

Q. 13. Agricultural programs and clientele motivation?
I would say that most of the questions that we have in our office are related to crop production, and many questions deal with horticulture, trees, vegetables, gardening, etc.... also, we have questions in ag. engineering, pesticides and things like these. I have been careful to keep track of the number of calls that we get in each area, as last year we had some extension council members who were quite inquisitive about these things....

Q. 14. Agricultural programs with higher priority?
I think that the three main categories of interest have been: crop production, livestock production, and farm management. In this county we don't have too many people interested in community resource development type of activities.
Q. 15. Important characteristics of your county extension council?

I would like to see our extension council very strongly oriented toward program planning activities. This is a basic characteristic of a good council. They like to get involved in more administrative type of things. This is explainable because they usually are administrators, members of church councils, administrators of grain elevators, etc.... our last county extension council was more program planning oriented....

Q. 16. Is training provided for extension council members?

Yes.

Q. 17. What aspects were included in the training?

We usually expend a good share of the first meeting of the year giving them training on philosophy of the extension service, and responsibility of the county extension council members. As we go through the year, when new important things come up, we give them additional training.

Q. 18. County extension director's role in council's functions?

I would say that my role is the management of the extension council. We have an agenda, a listing of the bills, and a presentation of the financial situation. We give a report to the extension council, not only verbally but also written by areas of concern, for instance, agricultural production and 4-H and Youth. In every meeting we try to incorporate new information on special needs or current issues, such as energy problems and things like this.

Q. 19. Characteristics of effective council members?

First of all, attendance at meetings and second, they are to be thinkers, they are to be people that give their opinions and contribute to the committee work. Some of them are just like rubber stamps. I like to have people that do some thinking and ask questions, because they give you the opportunity to provide answers that hopefully will help the total situation. Third, they must be creative and inquiring people. In our council we now have six women out of seventeen members; when we have more women on the council we have a better attendance.... I have found that a good way of motivating the council members to attend meetings is giving special reports during the meetings. We provide them some information that is not known by the rest of the people in the county, and they feel they are being treated with priority....
Q. 20. Involvement of local producer associations?
   Yes, I use to involve them.
Q. 21. How do you involve them?
   We involve both beef producers and pork producers to work with them. I periodically meet with their boards to get program ideas as well as to help them with their functions. I believe that this situation varies across the state; I know some county extension directors who have nothing to do with commodity groups; others, like me, have them fully involved.... My experience working with them has been interesting.
Q. 22. Cooperation with other local agencies?
   Yes.
Q. 23. How does it work?
   One of the agencies with which we have a close cooperation is the Soil District Commissioners. I meet with them a few times a year. Last year we cooperated in a program on conservation tillage. We had a conservation tour with them and we had a meeting on tillage cooperatively. We do not work too closely with other agencies like Agricultural Stabilization and Conservation because they are more oriented with programs of a regulatory type of things, except when we have a farm program where we need an explanation of this. We also cooperate with the vocational agriculture teachers in the schools. We have three vocational chapters in Indiana county. They have an adult evening program and we work together in holding, at least, two meetings per year. Sometimes the Iowa State specialists come to teach some classes during the winter.
   We have a junior livestock show at the county fair which is 4-H and FFA together... we work together in organizing, and so on. We used to have a separate show for FFA and 4-H, but now we work together.
Q. 24. Opinion about SEMIS?
   I would not say that SEMIS is a real important part of program planning, however, I think that it is a necessary thing. Some 20 years ago we spent a lot of time filling reports on what we did every day; now with SEMIS it is different. I can use the last year's report to know how many days I used in a particular program, in order to evaluate my time for that program. This is the main use of the retrieval information.
Q. 25. Does lack of time affect your programs' effectiveness?

I would say sometimes.

Q. 26. Why?

During the winter time we have a lot of meetings. They put a lot of pressure on us. I feel that I would like to do a better job in publicizing programs and to have more time to plan things, but really this is not a major problem....

If people keep coming into the extension office or calling by telephone, it is because they trust in us and believe in extension and this is important. It is better to have a lot of things to do, than to have the desk clean. Most people can wait, a day or so, when we are out of the office; most of the questions are not too urgent.

Section Three: Factors Related to the Program Planning Process

Q. 27. County extension council's functions in program planning?

Primarily their functions are for approval of activities.

Q. 28. Main sources of information on agricultural programs?

In Indiana county we have a program planning committee in which I select some people who have attended previous meetings and other people interested in extension activities. These are about 25 people, who are appointed or approved by the extension council. We meet with them once a year to develop ideas for the next year's programs. Before they come to the meeting I send them a questionnaire to get ideas.

In program planning we use ideas of people that come in to visit with us. These things are all put together in order and then they are presented to the council for approval, or modification. In my years with extension I would say that the most difficult thing that I encounter is program planning, because it is really hard to get information from the people. I do not think that I can rely strictly on the extension council to do it because they are not always aware of people's needs.

Q. 29. Statistics used in program planning?

We use the agricultural census reports, but not too many statistics. However, we do know how many acres of corn or soybeans are cultivated in the county or how many hogs are raised.
Q. 30. Procedures for determination of needs?

The planning committee as well as the extension council provides ideas that we discuss with them.

Q. 31. Factors considered in setting priorities?

As far as individuals and farm people are concerned we find out what types of programs are needed. We also provide space in our program for current events. For instance, in the last year, energy was one of the programs available at state level, so we left a little room in our plan for this type of program. We also have some information coming from the area specialists. They inform us on what is new or what new ideas have been developed. Although the council has the final approval for programs, it is pretty much based upon recommendations by the county staff members.

Q. 32. Specialists' contribution to program planning?

We get ideas from the specialists for particular areas of our programs. A year ago we had the so-called land-water-energy program for Century III, and this was really developed through our subject-matter specialists.

The system of area specialists is good for me, but on the state level, I think that there should be more swine production or farm management specialists than dairy specialists. An example, in our county dairy is not a big enterprise. I think that we could also use more help in farm management.

Q. 33. Who makes decisions on formal program delivery?

Our staff members are primarily responsible for developing programs, but sometimes we get suggestions from the council on the use of radio or t.v. programs and/or field days.

Section Four: Factors Related to the Program Implementation Process

Q. 34. Most effective communication channels?

I would say meetings have been most effective. People have the opportunity to ask questions to the specialists, and they can teach more effectively besides, radio programs, newspapers. I think that the one-to-one basis is the best educational system to teach people and answer their questions, but is does not allow us to reach many people.

To publicize programs, radio continues to be the most important followed by newspapers. We have a local radio station whose manager is quite interested in extension and cooperates very well with us.
Q. 35. Agricultural programs with a higher attendance?

Yes

Q. 36. Which ones?

In this county I would list the level of attendance as follows: 1. Crop production; 2. Pork production; 3. Care of house plants.

Q. 37. Influence of specialists on program implementation?

Yes, they have influence on the attendance of people. Let me explain why. Specialists write newspaper articles, or appear in t.v. programs. For example, in the area of horticulture, when people learn that the specialist is coming to teach a program in the county, it causes a good feeling in them because they will have a chance to ask him questions and discuss their problems. There are some people who attend a meeting depending on who is the specialist.

Q. 38. County council contribution to program implementation?

I would say not at all. I wish they participated more in implementation than just encouraging the people to attend the meetings. Perhaps we don't use them too effectively in program implementation.

Q. 39. Most effective teaching methods?

I have realized that people tend to be turned on by slide presentations. The kind of meetings in which people see and hear, tend to be more stimulating for them. I do not mean that this is true for every meeting, because in some cases slides have been overdone.

Q. 40. Factors related to time and place to deliver programs?

This mostly depends on the season of the year. Other than winter a good share of our meetings are held in the evening but during the winter time when there is no farm work involved, day time programs work quite well. We always think about the audience that we are trying to attract when we select time and location. As far as place is concerned, we have no problem since we have a good meeting room. Sometimes we have the meetings in some of the local buildings, but this depends on how many people are we going to have.
Section Five: Factors Related to the Program Evaluation Process

Q. 41. Factors considered in evaluating agricultural programs?

I think that evaluation is one of the areas in which we have weaknesses, because it is a difficult thing to grasp. Most evaluations are verbal by asking the people what they think and what they learned. We do not use many written evaluations perhaps because of the pressure of time that we talked about earlier.

Q. 42. Evidence utilized in evaluating programs?

We use to do a kind of evaluation with our extension council. For instance, we picked out one of the programs, such as crop production, and we asked them what did they hear about this program, or what they thought about it. Maybe we don't have written objectives, but we know what we want to accomplish, and this is primarily heard rather than written down.

Q. 43. Specialists' role in evaluations?

I would say it is quite limited. We do not talk too much about this. Sometimes we have a verbal contact with our area specialists about what they did in the last course and whether the course objectives were accomplished or not. So there is a verbal communication but not a written one.

Q. 44. County staff's role in evaluation?

Here again, I would say in a couple of cases we used a written questionnaire to evaluate, but in most cases we just sat down and thought about what we really accomplished.

Q. 45. Do planners evaluate programs?

To a limited extent but not always. We get more evaluation from our extension council than from the program planning committee.

Q. 46. Is a "follow-up" procedure used in evaluation?

In some cases I'd say yes, but in most cases I'd say no. For instance, in the last few years one of the programs that we have had is in conservation tillage, in cooperation with the Soil Conservation Service. In this case we can go out to the countryside and see how things are going on and observe the differences between the old and the new practices. There you
can see some fruits of your labor. But, when we discuss something on let's say swine nutrition, it is hard to say whether they do certain things because of us or because they read it in magazines. In some cases, we send them a questionnaire to find out what of the things we talked about were done by them. In the case of conservation tillage, it is easier for us to take a little credit on what has been done.

Case number 2: Extension Director of Nebraska County

Q. 9. Training in administrative management?

Yes, I had a course prior to taking this position as a County Extension Director.

Q. 10. Training content?

It included administration of county extension programs, budgeting and communications... It was probably one of the most beneficial off-campus training courses I have ever taken.

Q. 11. Administration and subject-matter activities?

My time includes 20% administration and 80% subject-matter activities.

Q. 12. Useful courses for county extension directors?

I think that a course on office communications would be extremely useful. Most of our administrative duties involve the management of the office, budgeting, office equipment, and facilities, but here in Iowa the county extension directors do not have administrative responsibility toward the professional staff. You need to have people want and like you rather than enforce them to accept you as it happens in other organizations. I think that a course of leadership in administration would be very important.

Section Two: Factors Related to the County's Agricultural Extension Profile

Q. 13. Agricultural programs and clientele motivation?

I think that those activities in which the clientele may participate produce the most motivation. Therefore, field days, tours and demonstration plots produce more motivation in the clientele. I think that for many years we have held extension programs as open meetings, but I have found that they do not fit most of the needs of the people because agriculture is
extremely specialized. The clientele we are dealing with for the most part have college degrees. In order for us to present a particular program we have to spend a great amount of time and intensive effort on a specialized area, and still may not answer the question of the people attending the meeting. Therefore, field days are much more effective to present the information and provide an opportunity for the people to ask questions about their problems.

Q. 14. Agricultural programs with higher priority?

1. Crop production; 2. livestock production and particularly swine production; 3. energy conservation; 4. horticulture. I expend a good deal of my time with the clientele working in that area. It is not unusual for us to get seventy-five to one hundred calls a day asking questions about horticulture....

Q. 15. Important characteristics of your county extension council?

I take great pride in the county extension council. I feel every individual on the council deserves attention and should receive all the information that we can give them. For them to be really effective there should be a broader representation of occupations on the council. We have 6 women out of 13 members, and they can lend their expertise in the areas of home economics and 4-H. The council members should also be leaders in their communities, and for the most part, they are. Moreover, they should be broad-minded people with an interest in knowing the complete make-up of the total extension program.

Q. 16. Is training provided for extension council members?

Yes, it is.

Q. 17. What aspects were included in the training?

I usually spend two to three hours with the new extension council members after completing the council election.... We review the council's functions, discuss the background and the purpose of the extension service, the organization of the county office and its relation to the area office and Iowa State University. We also provide them some training in the area of budgeting and the extension's financial system, from federal, state and county sources.

Q. 18. County extension director's role in the council's functions?
My role is to provide leadership and involve the council members in the decision-making process. I explain to them that they are responsible for making important decisions in our county. I also try to acquaint them with the numerous functions of extension. I have to instill in them the dedication to attend the council's meetings.... We have unusually good attendance, about 85% this past year which is very good. Another thing I try to do is to bring representatives of other agencies to the council so they can develop good relationships with other agencies of the county. I also keep them informed of the upcoming activities of the next month....

Q. 19. Characteristics of effective council members?

First of all, they must be broad-minded people; I want to emphasize this because some of the members of our council are pretty much farm oriented and many of our communities now have urban centers. They must be concerned about the community needs, the minority groups and the disadvantaged. They must also be receptive to changes in extension according to the people's needs. Finally, they should be willing to become involved in the extension programs themselves.

Q. 20. Involvement of local producer associations?

Yes.

Q. 21. How do you involve them?

In Nebraska County we have two commodity groups, the Cattlemen's Association and the Pork Producers' Association. When the time comes to carry out a hog production program in our county, I meet with the pork producers' board and ask them for suggestions. They also endorse our program in the county. I also attend some of their meetings, banquets, and promotions. I do this whenever I can as this is very important for us. The involvement of commodity groups in our program is advantageous to the extension program.

Q. 22. Cooperation with other local agencies?

Yes.

Q. 23. How does it work?
We meet with them periodically to discuss their programs, although some of their programs, like those of the Soil Conservation Service are not educational programs, but action programs, regulatory, and conservational. We do work with them closely, particularly in the area of conservation tillage. We need to emphasize that area in this county, as we are losing a lot of our top soil because of water and erosion. I go with the people of that agency periodically to the countryside to visit some programs. We have some coordinated programs with each other, for instance we do radio programs and news articles together. Also we have excellent relations with the community college programs in the county. Their students sometimes attend our meetings, as they do not have agricultural programs. We work with them also in some public affairs programs, such as Century III.

Q. 24. Opinion about SEMIS?

It gives evidence of the time I spend, but maybe I do not know how to use it in program planning. It only serves as a guide for me to look at the last year's total summary and see in what areas I spent a considerable time. As far as program implementation and evaluation is concerned, I do not think it is useful.

Q. 25. Does lack of time affect your program effectiveness?

I do not think so.

Q. 26. Why?

At one time I'd say yes, but after many years of working in extension, I say no. I think that we can and have to learn to effectively manage our time.... It takes quite a while, but it is possible. We need to learn to be quite selective of our activities and areas of involvement.

Section Three: Factors Related to the Program Planning Process

Q. 27. County Extension Council's functions in program planning?

They brainstorm for us. We have a session of the council in which I hand them a list of topics for them to check for the level of importance. They check them and return them
to our office. We need to do a good job in using the available resources. For instance, we know that during the year the area specialists are working in the different counties. We therefore have to know when they are available in order to plan activities in which we want their assistance.

Q. 28. Main sources of information on agricultural programs?

In planning programs we use the latest census; also information that we have gained in the meetings from the previous years. I used to hand out some cards in every meeting asking the audience what would they like us to cover in the next year. We also use information from the other agencies we work with in the county. A main source of information is through the traffic that comes in and out of the office. People ask us many questions about their needs. We answer them and keep a record so that the information can be used for the next year's program.

Q. 29. Statistics used in program planning?

First of all, we use census materials and county surveys. Secondly, I conduct our own survey on the people who attend the meetings as well as other surveys in the county on how families use the extension service. On the basis of these surveys we try to cover the things that people need and want to learn.

Q. 30. Procedures for determination of needs?

We use the following: local agencies, surveys, commodity group information, surveys in short courses, Iowa State at a state level.

Q. 31. Factors considered in setting priorities?

First of all, we ask if we have the necessary resources in extension to meet the needs of the people in the different program components; in many instances we don't. Secondly, we use unbiased sources in the county, such as attorneys and local government representatives. Third, we discuss priorities with the extension council.
Q. 32. Specialists' contribution to program planning?

The state specialists have prepared a volume of ideas and suggestions on program planning that we use to a limited extent. The area specialists spend a considerable amount of time with our staff in area meetings, discussing aspects that could be included in the next year's program.

Q. 33. Who makes decisions on formal program delivery?

The county extension director is responsible, along with the subject-matter specialists and the extension council. I think that the council relies upon the county extension director to put all the things together to present the program.

Most of my winter meetings are held with the subject-matter specialists to decide on the next year's program and audience. We decide whether or not we are going to use resource persons from the county. As an example, the cooperation from the local veterinarians and other local people is excellent. I can say that some of my best programs have been carried out with their cooperation.

Section Four: Factors Related to the Program Implementation Process

Q. 34. Most effective communication channels?

In my opinion the most effective channels are radio and newspapers. They allow us to reach a large number of people. I have had a column in the newspaper, and we get a tremendous response to it from the people. I have also held a weekly radio program, which is very effective. The best way to help people solve their problems is through the one-to-one basis.

Q. 35. Agricultural programs with a higher attendance?

Yes, there are some.

Q. 36. Which ones?

Most of the programs that have greatest attendance are "emergency" programs. We had a flood some years ago, and two thirds of the county was under water. We had meetings trying to give some alternatives for the people and in three meetings we had an average attendance of eight hundred people.
Other programs with high attendance are crop production, pork production, and horticulture, as they have a lot of economic influence in the county.

Q. 37. Influence of specialists on program implementation?

Specialists lend authenticity to the program. They have the facts and the latest resources and they are unbiased. I have a high regard for the subject-matter specialists.

Q. 38. County Council's contribution to program implementation?

They provide the necessary tools to carry out the program. They help us implement programs by telling us how we are doing and what things need to be changed or improved.

Q. 39. Most effective teaching methods?

In my opinion one-to-one is the most effective teaching method. The immediate interaction of the teacher and the learner is more effective.

The second method that I consider very effective is the small-group meeting where the farmers can participate in the program themselves. They tell other people about their own experiences.... I believe that they probably have more credibility among their fellow farmers than we will have with them.

Q. 40. Factors related to time and place to deliver programs?

We consider these factors: 1. The program should not be presented at the same date and time of other important local events; 2. we also make sure that the meeting room we are going to use has a central location with a parking place and where people may easily find a good place to eat their lunch and come back for the afternoon meeting.

We are fortunate in that respect because we have a large meeting room available in town where most of our meetings take place. In some cases the local agencies cooperate with us to provide locations for our programs with larger audiences.
Section Five: Factors Related to the Program Evaluation Process

Q. 41. Factors considered in evaluating programs?

Probably we have not done a good job in evaluating our programs but we are trying to improve our system. We use:
1. surveys; 2. questionnaires; 3. visual observations; 4. reports from our council members.

Q. 42. Evidence utilized in evaluating programs?

1. Evaluation reports completed by people after meetings.
2. We take a lot of "before-and-after" photographs. For instance, when some of our clients remodel swine facilities we take some pictures of the old and the new facilities.
3. We visit with other agencies in the county, like the Soil Conservation Service and talk about conservation tillage.

Q. 43. Specialists' role in evaluation?

They help the county staff in determining the evaluation tool to be used. They also provide us with ideas on evaluation methods that we can use which have been successful in other counties. Sometimes they help us evaluate in their specific areas such as in livestock by the specialist.

Q. 44. County staff's role in evaluation?

They are responsible for developing the procedure for the evaluation and for evaluating their programs. They also cooperate in evaluating other staff members' programs.

Q. 45. Do planners evaluate programs?

Yes, our extension council does a lot of evaluation as well as the commodity groups that work with us in planning programs.

Q. 46. Is a follow-up procedure used in evaluation?

I would say no. I do not have a real good follow-up procedure. I use surveys and this sort of things, but to say that I have outlined an exceptionally good procedure to determine what practices are carried out and document this as such, I really can not.

Generally speaking, follow-up procedures are difficult most of the time because they are time-consuming.
Case number 3: Extension Director of Texas County

Q. 9. Training in administrative management?

Yes, I have had some, but not formal training.

A. 10. Training content?

1. Time management; 2. Personnel management, which has been very useful for me; 3. Communication. As far as specific formal administrative training, I have not had any along this line.

Q. 11. Administrative and subject-matter activities?

I suspect that I have to divide my time in 30% administration and 70% subject-matter activities. I would define administration as working with the extension council, working with other staff members, working on budgeting, and operation of the county office, etc.

I would define subject-matter work as preparing letters, recruiting audiences, teaching and answering questions from the clientele.

Q. 12. Useful courses for county extension directors?

Some of the courses I find useful are: 1. Organizing ourselves, that means, organizing our time and our resources in order to be more effective. 2. Personnel management, which is important to create a smooth climate for work and better working relationships. 3. Communications. It is important for us in our job to be more effective communicators.

Section Two: Factors Related to the County's Agricultural Extension Profile

Q. 13. Agricultural programs and clientele motivation?

In this county the agricultural programs that produce most motivation are: 1. Crop production, people want to learn more about how to increase yields, grow more bushels of corn and soybeans, etc. 2. Swine production; this enterprise has produced higher returns in the last several years
and the number of hogs in our county has increased in the last few years. 3. Energy programs; the energy crisis has apparently influenced the people greatly, since they are now more aware of the cost involved in saving energy by utilizing better insulation systems and remodeling old facilities in livestock buildings. Solar energy has become a popular topic among producers and they are asking more questions about it. 4. Marketing; some years ago we had lots of difficulty in attracting people to meetings where marketing was a central issue. They are now more interested in marketing strategies, uses of future markets, outlook information, and so forth.

Q. 14. Agricultural programs with higher priority?

In our current plan of work they are: 1. animal production, particularly swine production; 2. corn and soybean production. The afore-mentioned areas are major sources of income of the people of this county, therefore, we need to have a good number of educational activities in these areas. 3. economics; we need to incorporate it into other areas such as production costs, shipping costs, and record analysis programs.

We are now working on a record book developed by Iowa State University, and we have a number of young swine producers in the county that are keeping the records and summarizing them every year. We have meetings with them to discuss and analyze the records and determine what the costs of production, feed, etc., have been. This record book is used in several counties.

Q. 15. Important characteristics of your council?

1. They need to know their responsibilities, what is the role of the council, and be knowledgeable about what the extension service is and what it does. 2. They have to be very broad-minded people, and have a high respect for education. 3. They should be interested in serving on the council. 4. They should be creative people that discuss and question. We do not like rubber-stamp persons at the meetings; I would
say that my council members have been idea-generating people in a general sense, and this is important for our program. They bring new ideas to each council meeting.

Q. 16. Is some training provided for council members?

Yes, it is.

Q. 17. What aspects are included in it?

On an area basis we bring our extension councils together and have some training for them. This involves discussion on legal aspects of the extension service, what the extension law says, and what are their responsibilities in program planning. We also have some training meetings for new council members, which include information on what extension is and their functions as a council member.

Q. 18. Your role in the council's functions?

The extension director here is important. He is to be an organizer, which means, he must organize the materials and information, prepare the agenda, etc. He also must be a facilitator, bring subject-matter information that perhaps could help them understand their role. We must also have high expectations for them.

Q. 19. Characteristics of effective council members?

1. They need to have some leadership abilities; 2. be motivated to participate; 3. value education as something important and 4. be interested in people. I think that it is helpful if they are outstanding farmers in the area and are reflective of good agricultural practices, but this is a personal bias on my part.

Q. 20. Involvement of local producer associations?

Yes.

Q. 21. How do you involve them?

Staff members usually attend their meetings. I go to the local pork producer, cattlemen and sheep producers meetings, as well as the poultry association meetings. By doing this, we generate program ideas, although we are not formal members of any group. We keep in contact with them for planning programs and so on. Sometimes they let us, for instance, have slides of their members' facilities to be shown in our meetings since it is not a good idea anymore to go from one
farm to another with tours because you may spread disease.

We have a group of producers which meet in our office once a year with the specialists from Iowa State, the area specialists and myself to plan the program for the next year.

Q. 22. Cooperation understanding with other local agencies?

Yes.

Q. 23. How does it work?

We have an agricultural education task force composed of the extension director, the vocational agriculture instructors, and the area school people in the county. We meet every other month and spend some time going over what each group is doing. Once a year we try to plan our programs so we avoid duplication of our programs and work out ways of doing things jointly. We are friendly and communicate with each other. Sometimes we have social activities, play sports, and so on.

Q. 24. Your opinion about SEMIS?

Quite frankly, up to now SEMIS has not been too important in planning, implementing or evaluating programs, from a local point... perhaps it is useful from a federal or state standpoint for budgeting purposes, and for obtaining funds. At the local level it is not useful because we do not get the kind of feedback from the system that we need. We have not had a systematic way of taking that information and using it in planning and developing programs.

Q. 25. Does lack of time affect your program effectiveness?

I would say yes.

Q. 26. Why?

Maybe we have not done a good job in setting priorities in the past. I think that with the energy crisis now we are going to be more conscious of the time.

In the future, we are going to set up days for the livestock and crop specialists to come over to visit with the people and answer their questions. In this way they will save gas and time.
Section Three: Factors Related to the Program Planning Process

Q. 27. Council's functions in program planning?

Their functions involve a legal responsibility to adopt and approve the program. They vote yes or no on the county extension program for the year.... We spend a number of meetings with the extension council on program planning. Finally they generate topics and suggestions that we prepare for the different program components.

Q. 28. Main sources of information to plan agricultural programs?

I suspect that our main source of information is Iowa State University. They are the institution we look for program ideas. This year the Federal Extension Service has some program priorities that they would like to see developed. For instance, the Century III program is developed and organized at the state level.

Q. 29. Statistics used in program planning?

We use the agricultural census, which has a lot of good information. We also try to make comparisons on what happened some years ago with present trends in farming. Examples are: Are young people entering the farm business more now than some years ago? What is the average age of the farmer? What kind of clientele are we working with? What is the average size of the farm? And what is happening to the livestock population? We also assess information by township, taxes, and population trends. These aspects are important for us in program planning.

Q. 30. Procedures for determining needs?

We use several techniques: 1. Tabulate during certain periods of the year the number of telephone calls we get: it gives us some idea on people's needs. 2. The kind of questions coming into our office during those periods of the year are used quite a bit. 3. We also use survey forms for the people to suggest ideas before they leave the meetings. 4. We use the idea-book put out by Iowa State University, which brings some program ideas prepared by subject-matter specialists. It is quite helpful to us not just in program planning, but also to know what kind of programs can they deliver.

Q. 31. Factors considered in setting priorities?
1. Economics; what kind of problems are important to people in regard to income and economics in production. 2. Low income audiences, and minority groups. 3. Current issues, such as energy crisis.

Q. 32. Specialists contribution to program planning?

1. Through the idea-book, they give us program ideas and perhaps certain priorities. They also give us a frame-work on how to set priorities.

Q. 33. Who makes the decisions on formal program delivery?

The people responsible are the county extension director along with the area and state specialists. In a meeting with the council we get some ideas from the specialists on methods. We rely on lay leaders for some advice, but the final determination on methodology rests on the state and county extension workers.

Section Four: Factors Related to the Program Implementation Process

Q. 34. Most effective communication channels?

I am not sure that I can respond very well because we have not done a formal evaluation of them. I think that our experience with some channels has been good. I would say they are: 1. meetings, including in them tours and sit-down formal meetings. 2. The one-to-one approach is a very effective educational system. We certainly underestimate the importance of the mass media; they allow us to reach a lot of people, but it is more difficult to evaluate than through personal channels.

Q. 35. Agricultural programs with a higher attendance?

Yes.

Q. 36. Which ones?

Those programs that relate to the production aspects, such as pork, corn, soybean, and beef production. We are trying to direct the programs to specific aspects of each enterprise. For instance, how to make corn silage, instead of talking about corn production. Apparently this single-item content has been well accepted by the clientele, as it provides them more specific answers to their problems and needs. We need to spend some time in preparing and implementing these types of programs.
Q. 37. Influence of specialists on program implementation?

I think that the one-to-one consultation seems to generate more success stories than anything else. We are able to see what our clients have done and tell them what they need. One of the strongest points of extension is the troubleshooting aspect. A herbicide did not work; what is wrong with this corn, etc. In several cases we resort to area or state specialists to help people solve these problems. They are very effective in providing answers to them.

Q. 38. Council contribution to program implementation?

We use the council a lot to help us to publicize our programs. We also ask them to tell in their townships what we are doing. Sometimes, in the meetings they show slides of their facilities and buildings and share their experiences with other people. In other words, they are the teachers.

Q. 39. Most effective teaching methods?

I think that meetings are the most effective teaching method we have used in this county.

Q. 40. Decisions on time and place to deliver formal programs?

We try to schedule the program when the participants will be least interrupted... we try to plan year around but before harvesting. Decisions on programs depend on the season. Fall is a good time for outlook meetings. Summer is a good time for conservation meetings, or landowner-lady programs. Winter is a good time for farmer meetings.

Another thing we need to do to have good attendance is to have attractive facilities and be well organized for the meeting.

Section Five: Factors Related to the Program Evaluation Process

Q. 41. Factors considered in evaluating agricultural programs.

Traditionally some of the factors that we use to evaluate them have been: 1. Number of participants; 2. Contact hours of instruction, that is the number of people/hours that you teach. If you teach one person for ten hours, this is ten contacts. 3. Follow-up; we have a questionnaire divided into several sections. We send it to all the people that attended, asking them questions like, did you do what we suggested?.... If no, why?.... What have you done up to this point?, etc. 4. Personal observation; this is done when you have opportunity
to visit with the clientele on their farms; this system is good for you to see the things by yourself.

Q. 42. Evidence utilized in evaluating programs?

We usually use written questionnaires, although we also get evidence by talking to the people at the program. You attend the meeting, so you know how it went. Staff reactions to the meeting and the feedback from extension council members are sources of evidence to evaluate a program. They may hear something from the people in their townships about the program, and they let us know about it.

Q. 43. Specialists' role in evaluation?

Specialists help us to prepare evaluation documents. They are specialists in preparing evaluation questionnaires, and I think that they can help us along that line.

Q. 44. County staff's role in evaluation?

They tabulate the result of any formal document and then use these results in coordinating future programs.

Q. 45. Do planners evaluate programs?

Yes. The extension council helps in planning. They also attend the meetings and they do evaluate. I think that this is good.

Q. 46. Is there a follow-up procedure to evaluate?

Yes, we use a formal document and personal observation to do some follow-up of the participants. Probably we are not doing that in all the cases and perhaps we could do a better job on this. I used to spend some time visiting every farmer on a personal basis to see if they followed the recommendations and suggestions we gave them. We must remember in education things do not happen the next day; they need some time.
Case number 4: Extension Director of Ohio County

Q. 9. Training in administrative management?
I have had no formal training.

Q. 10. Training content?
In-service training provided by the extension service. It dealt with program planning and leadership.

Q. 11. Administration and subject-matter activities?
I think that I divide my time in 25% administration and 75% subject-matter activities.

Q. 12. Useful courses for county extension directors?
I think that a course on use of the computer for informational retrieval system in the office would be helpful for us. Sometimes it is difficult to remember all the information that we have.

Section Two: Factors Related to the County's Agricultural Extension Profile

Q. 13. Agricultural programs and clientele motivation?
Those programs that help people to increase the quantity and improve the quality of their lives are more motivating for them... quantity in terms of larger income, larger yields, and these things, also enhance the quality of their lives.

Q. 14. Agricultural programs with higher priority?
Most attention has been given to crop production and livestock programs, as the economy of the county is quite oriented to these areas.

Q. 15. Important characteristics of your county extension council?
1. They are enthusiastic; 2. They have a high degree of interest in extension programs; 3. They are interested in education; 4. They want to learn themselves; 5. They are interested in the needs of people.

Q. 16. Is training provided for council members?
Yes.
Q. 17. What aspects were included in the training?

We explain the functions of Iowa State University in research, teaching, and extension. We spend some time on the functions and responsibilities of the council. They also have to have an understanding of the democratic process of decision making. We give the new members one and one-half days of induction training.

Q. 18. County extension director's role in the council functions?

I provide guidance to them and help carry out the policies. I provide adequate data and information for helping them to make good decisions.

Q. 19. Characteristics of effective council members?

1. They must have an understanding on the democratic process;
2. have a certain feeling for people; 3. have an understanding on the importance of education in our society; 4. look at the total county, and not just to specific groups; 5. have some insights about the problems of the county.

Q. 20. Involvement of local producers associations?

Yes.

Q. 21. How do you involve them?

The producer groups are asked to fill out questionnaires to provide ideas on program planning according to their personal interest. They provide us opportunities for delivering our programs, have meetings and make announcements encouraging their members to attend the extension meetings.

Q. 22. Cooperation with other local agencies?

Yes.

Q. 23. How does it work?

We have a very good understanding with them. We meet with the agricultural teachers sometimes and we try to coordinate our programs. It has worked out very effectively. In regard to youth programs we had some overlapping, but now we are cooperating well with each other.

We also have a good understanding with other agencies such as the Soil Conservation Service. We meet periodically to discuss our programs and try to set the basis for cooperation.
Q. 24. Opinion about SEMIS?

I do not understand how to use SEMIS to the best advantage. I think that the plan of work helps you know the number of hours that you devote to the different subject-matter areas. Perhaps this information could be helpful in evaluating programs, but I do not use it; hopefully in the future I will learn how to use it.

Q. 25. Does lack of time affect your program effectiveness?

No, I do not think so.

Q. 26. Why?

I think that, in a general sense, one knows what activities demand more time than others, and plans his time accordingly.

Section Three: Factors Related to the Program Planning Process

Q. 27. County extension council's functions in program planning?

By state law they are given the authority to prepare and adapt the extension educational program. They help us to review the program areas and establish the priorities for them. Finally they approve the next year's programs.

Q. 28. Main sources of information on agricultural programs?

1. Surveys and questionnaires are good ways to find out things. 2. We have a lot of feedback from people throughout the year and we record what people think about our present programs. 3. Commodity groups, such as pork producers, are also a good source of information and through them we can get some ideas for our programs.

Q. 29. Statistics used in program planning?

We use all types of agricultural census, population census, farm census, crop and livestock reporting services, plus many studies available through farm magazines. For instance, if there is a private study carried out by some agricultural company about a future of agriculture, we use it.

Q. 30. Procedures for determination of needs?

I think that we usually use questionnaires, meetings, and discussion of the views of several groups of people. The personal views are very important. I find after being in the
county several years that when you visit with key leaders in the county you may get a lot of information about the problems that is useful for planning programs.

Q. 31. Factors considered in setting priorities?

The first factors are the staff input, and the extension council ideas. I also make a list of things that I observe and hear about the county's needs when visiting with the clientele. I take them into account for the planning meeting.

Q. 32. Specialists' contribution in program planning?

They can be very helpful, particularly the area specialists, because they review problems and have significant factual information. Sometimes they operate statewide, and have the opportunity to see and hear about problem areas that can relate to this county.

Q. 33. Who makes decisions on formal program delivery?

Once the extension council approves the program, the extension staff with the assistance of the area and state staff, work out the teaching objectives, teaching methods, and audiovisuals that we can use in carrying out the programs.

Section Four: Factors Related to the Program Implementation Process

Q. 34. Most effective communication channels?

We use all the media to reach clientele which includes television, radio, newspapers, magazines, and newsletters. Also, through other agencies that work with farmers, we ask them to announce the extension programs.

Q. 35. Agricultural programs with higher attendance?

Yes.

Q. 36. Which ones?

Some programs are more timely than others; there is an educational moment which is very important and difficult in planning. Some areas that have become very important are crop production, small business administration, and farm management. They increase the number of people in attendance in the extension programs.

Other aspects that are unusual and increase attendance are the emergency programs. For instance, we had 550 farmers in a meeting after a drought. That was an educational moment
because they urgently needed us to tell them how to proceed, because no corn means no money and no feed for the livestock.

Q. 37. Influence of specialists on program implementation?

They have the expertise and are excellent teachers. They know the latest research findings and have the ability to put this research into the laymen's language. They make excellent use of all types of visuals, videotapes, movies, etc. I could not operate without them.

Q. 38. County council's contribution to program implementation?

They help us to carry out the programs by diffusing them through the community and their neighbors. I think that they do an effective job in trying to make sure that people know about the programs.

Q. 39. Most effective teaching methods?

For me, the meeting situation in agriculture works best, although the one-to-one, office call, and telephone call methods are quite effective, but they are time consuming. The energy crisis tends to decrease the use of the individual methods. Television, radio and newsletters are more effective to teach large groups of people.

Q. 40. Factors related to time and place to deliver programs?

In agriculture this is quite an important aspect for the success of the programs. It is difficult to educate an adult when he is busy in his farming operation. We have found that the winter months are the most adequate to deliver these programs. We have also found that there are "key" times during the summer to deliver some programs, such as field days or tours. We must also take into account the availability of subject-matter specialists. Also, we must select a well-lighted room.

Section Five: Factors Related to the Program Evaluation Process

Q. 41. Factors considered in evaluating agricultural programs?

I think that evaluation is the most difficult part of our program. The criteria we use to evaluate the programs are: 1. Attendance, according to the potential audience; 2. Personal viewpoints, people tell us what they think about the programs and what aspects were particularly important. This can be very effective in increasing the attendance of the next meeting; 3. Questionnaires are also very useful, however
evaluation is quite difficult because we strive to present programs and do not take the time to evaluate.

Q. 42. Evidence utilized in evaluating programs?

I would say that we consider the number of people that attended the program and their personal viewpoints. I like to rely on the judgement of these people as well as that of the extension council members. They are so important.

Q. 43. Specialists' role in evaluation?

We use specialists in program planning, but, perhaps we do not use them enough in program evaluation. I would be glad to sit down with them and evaluate the programs, but here again the time factor limits us. In evaluation we use more of our area specialists than the state specialists, but our evaluation is perhaps not as structured and formal as it should be.

On the other hand, we teach in an informal basis which makes it difficult to test the knowledge of the farmers before and after the program has taken place.

Q. 44. County staff's role in evaluation?

I evaluate by myself the agricultural programs. Sometimes, I sit down with the other staff members and we evaluate the programs, but mainly I use the informal evaluation. When I drive home from a meeting I think about what was right or wrong. I may never write it down, but the experience helps me to know how to improve the next time.

Q. 45. Do planners evaluate programs?

Yes. The extension council is probably the most used group in program evaluation. Once a year they try to evaluate the different programs. We have committees within the different program components which carry out the evaluation.

In agriculture I use my commodity groups; I ask them their opinions of the last year's programs. Some things are easier to evaluate, such as the minimum tillage programs. We go to the farms to see the field, to see how the chemicals have controlled the weeds and things like that.

Q. 46. Is a follow-up procedure used in evaluation?

Follow-up is difficult in some cases because you cannot tell how certain practices have been used. However, surveys have been helpful to determine how they performed the practice and why they did or did not use the practice.
Case number 5: Extension Director of Wisconsin County

Q. 9. Training in administrative management?
   I have not had any training.

Q. 10. Not applicable.

Q. 11. Administrative and subject-matter activities?
   I would say that I divide my time between 20% to administra-
   tion and 80% to subject-matter activities.

Q. 12. Useful courses for county extension directors?
   According to the nature of the extension work, we probably
   need some training in education and emphasis in our subject-
   matter area, agronomy, animal science, etc. I think, also,
   that it would be helpful to have some courses in extension
   itself.

Section Two: Factors Related to the County's Agricultural Extension
Profile

Q. 13. Agricultural programs and clientele motivation?
   In our county all of the farms are involved in crop production
   activities, so as far as the program components are concerned
   they are the most important. Also a small group of our
   farmers have livestock businesses which is the second area
   of importance.

Q. 14. Agricultural programs with higher priority?
   1. Crop production, particularly corn and soybeans.
   2. Livestock, particularly hogs.

Q. 15. Important characteristics of your county extension council?
   The extension council is the government body used to help
   carry out the educational programs for the whole county. They
   identify ideas and share them with the staff about the
   program needs.

Q. 16. Is training provided for the extension council members?
   Yes.
Q. 17. What aspects are included in the training?

They receive training and information in each monthly meeting of the council. The type and amount of training they receive depends on the background of the council members. They receive information on extension, the county organization and its relationships to the area and to Iowa State University. They also are trained about the council's functions and budgeting.

Q. 18. Your role in the council's functions?

I provide guidance for them and information on the different aspects of the extension office, budgeting, and programs, in order to help them in their role.

Q. 19. Characteristics of effective council members?

1. They must be interested in the program. 2. They must be willing to listen as well as to help and give suggestions to the staff in regard to the program. 3. They must be willing to encourage people to attend the extension programs.

Q. 20. Involvement of local producer associations?

Yes, I involve them.

Q. 21. How do you involve them?

The commodity groups are a good source of information for our program. The members of the swine association of the county produce 95% of the hogs in our county. They are interested in learning and in keeping swine as a farm enterprise. They and the beef producer association, as well as the crop growers association help to sponsor our activities. Also, the bankers are supporters for our 4-H programs. Grain elevators donate seed-beans for our soybean plots and of course contribute some money to our 4-H funds, and give us ideas for all the programs.

Q. 22. Cooperation understanding with other local agencies?

Yes.

Q. 23. How does it work?

We have meetings very often with other agencies' directors, and work together in some of our programs. An example is the Soil Conservation Service in which we have some joint programs.
in conservation tillage. Also, we have some cooperation with the vocational agriculture teachers. We help them to present programs for low income farmers.

Q. 24. Opinion about SEMIS?

When you get the print-out material from SEMIS, they give you some idea on how many hours have been spent in the different types of programs in this area or state. However, the information provided to SEMIS is not always quite accurate. In program implementation I do not think that it is helpful. In evaluation, it helps to some extent, because you can analyze the figures.

Q. 25. Does the lack of time affect your program effectiveness?

Yes, I think so.

Q. 26. Why?

If you have many different activities or types of programs, you think that you would like to have more time for them.

Section Three: Factors Related to the Program Planning Process

Q. 27. County extension council's functions in program planning?

The council helps to plan and give ideas and suggestions for the entire program. This is why they contact other people and are a good resource as far as helping the county program.

Q. 28. Main sources of information on agricultural programs?

I think they are: 1. the extension council; 2. the producer associations, especially their directors; 3. surveys of groups attending a particular meeting; 4. Iowa State University.

Q. 29. Statistics used in program planning?

We mainly use: 1. agricultural census material; 2. production figures in the county; 3. surveys among the people of the community to know their needs.

Q. 30. Procedures for determination of needs?

In determining needs we use surveys and pick up ideas from people coming in to request our services or we ask questions about their needs and problems.
Q. 31. Factors considered in setting priorities?

We are basically a corn-soybean county, so our agricultural programs are centered around these two crops, their production, management, and marketing. Our priorities for livestock programs are on beef and pork production because they are the larger enterprises. We devote some efforts to sheep, dairy and poultry, because some people need them.

Q. 32. Specialists' contribution to program planning?

Area specialists help greatly in program planning. We need their expertise, and they give us suggestions and ideas on what is available from Iowa State University.

Q. 33. Who makes decisions on formal program delivery?

The extension staff, both at the county and area levels and the specialists from Iowa State University are helpful by using a variety of teaching methods in special programs. They help the county extension director decide on what methods and aids are available to be used in each program.

Section Four: Factors Related to the Program Implementation Process

Q. 34. Most effective communication channels?

We use a combination of different things and the individual letter or postcard is probably the best channel we use to get people interested in attending our programs. We also use radio, newspaper, or magazines to attract more people.

Q. 35. Agricultural programs with a higher attendance?

Yes.

Q. 36. Which ones?

Our largest attendance is in crop production because the largest number of people are concerned about those programs.

Q. 37. Influence of specialists on program implementation?

The area specialists come and help with our county programs. We have a corn-soybean clinic with the soil conservation people and the subject-matter specialists. They give updated information which always increases the people's interest. They provide information, based upon research findings.
Q. 38. County council's contribution to program implementation?

We try to involve the extension council in encouraging the people to attend the programs. Other times we have them get involved in presenting some aspects of the program, such as slides of their own farms.

Q. 39. Most effective teaching methods?

We use different teaching methods, but some of the most used are: 1. two-hour meeting; 2. all-day meeting from 9:30 a.m. to 3:30 p.m.; 3. one-day crop tour; 4. master soybean producer contest. In this last method we have special contests, comparing wide rows with narrow rows in soybeans, and we get a lot of information from that particular system. Sponsoring groups give awards and a dinner for the attendants.

Q. 40. Factors related to time and place to deliver programs?

The main factors are: 1. who is going to attend a particular program; 2. when the program is going to be delivered; 3. what aspects are going to be presented.

During the winter time we like to have our meetings during the day time. When we have programs in the evenings, we have to be sure that no other big event is going to take place at the same time.

Section Five: Factors Related to the Program Evaluation Process

Q. 41. Factors considered in evaluating agricultural programs?

In evaluating of programs, the first thing to think about is if the people learned what was taught and then determine how they used it. Many times, things do not happen the next day, or the next year. This depends on the type of information that has been given.

For instance, when people are given information about fertilizers, or new varieties of soybeans, they adopt the ideas as soon as possible, but when they receive information about improvement of swine facilities, usually it takes time for them to adopt the new ideas.

Q. 42. Evidence utilized in evaluating programs?

First of all we use the number of people that attended the meeting, but you also have to determine what kind of conflicts people may have and can not attend a meeting. During the winter farmers may have five or six different places where they want to go. For instance, feed companies give them a
free dinner, or seed companies give them free programs. Secondly, as I mentioned in the last question, we think in terms of the teaching information given to the people in the meeting. Both criteria are considered in evaluating a program.

Q. 43. Specialists' role in evaluation?

The specialists along with the county extension director have a staff meeting in which we discuss the program and determine whether or not things were done as we wanted. We also make suggestions for changes in the next program.

Q. 44. County staff's role in evaluation?

As you develop so many different types of programs, it is difficult to take the time to evaluate them. In some programs you can get an accurate evaluation because you have ways of measuring the results, for instance in the soybean contests, you can measure yields. Really, this is one of the most difficult parts of the total extension program.

Q. 45. Do planners evaluate programs?

Yes. The council members participate in program planning and return to evaluation at council meetings with the county director and staff. In this way, staff may know what was going on and give suggestions on how to improve the next year's program.

Q. 46. Is a follow-up procedure used in evaluation?

We try to make some follow-up for the programs we develop. Sometimes it is easier than others to measure the results, because you have a wide variety of things and soon you have to change everything. As I said before, there are some programs that allow you to measure their results in terms of yields, while other programs do not.
Table 2. Means, standard deviations, rankings and ranges of selected factors of effectiveness of the agricultural extension formal programs, as perceived by the county extension directors

<table>
<thead>
<tr>
<th>Factor number</th>
<th>Mean</th>
<th>S.D.</th>
<th>Rank</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Knowledge of the extension council members' on the clientele's needs.</td>
<td>4.4000</td>
<td>0.8944</td>
<td>8</td>
<td>3-5</td>
</tr>
<tr>
<td>2. Determination of the program objectives.</td>
<td>4.0000</td>
<td>0.7071</td>
<td>11</td>
<td>3-5</td>
</tr>
<tr>
<td>3. Clientele motivation to participate in the program.</td>
<td>5.0000</td>
<td>0.0000</td>
<td>1</td>
<td>-5-</td>
</tr>
<tr>
<td>4. Determination of the program content.</td>
<td>4.6000</td>
<td>0.5477</td>
<td>3</td>
<td>4-5</td>
</tr>
<tr>
<td>5. Determination of the teaching method(s).</td>
<td>4.2000</td>
<td>1.0954</td>
<td>9</td>
<td>3-5</td>
</tr>
<tr>
<td>6. Technical knowledge of the county extension professional staff.</td>
<td>3.4000</td>
<td>1.1401</td>
<td>13</td>
<td>2-5</td>
</tr>
<tr>
<td>7. Subject-matter specialists' participation in planning, delivering, and evaluating the program.</td>
<td>4.6000</td>
<td>0.5477</td>
<td>3</td>
<td>4-5</td>
</tr>
<tr>
<td>8. County's financial and physical resources.</td>
<td>4.6000</td>
<td>0.5477</td>
<td>3</td>
<td>4-5</td>
</tr>
<tr>
<td>9. Use of resource people from other agencies.</td>
<td>3.2000</td>
<td>0.8366</td>
<td>14</td>
<td>2-4</td>
</tr>
<tr>
<td>10. Method of evaluation used to determine the accomplishment of the program objectives.</td>
<td>4.0000</td>
<td>0.7071</td>
<td>11</td>
<td>3-5</td>
</tr>
<tr>
<td>11. Instructors, teaching method(s), and teaching aids, evaluation.</td>
<td>4.2000</td>
<td>0.5477</td>
<td>9</td>
<td>3-5</td>
</tr>
<tr>
<td>12. Participants &quot;feed-back&quot;.</td>
<td>4.6000</td>
<td>0.5477</td>
<td>3</td>
<td>4-5</td>
</tr>
<tr>
<td>13. &quot;Follow-up&quot; of the program participants.</td>
<td>4.6000</td>
<td>0.5477</td>
<td>3</td>
<td>4-5</td>
</tr>
<tr>
<td>14. Determination of the participants' attitudes toward the program usefulness, in regard to their personal needs.</td>
<td>4.8000</td>
<td>0.4472</td>
<td>2</td>
<td>4-5</td>
</tr>
</tbody>
</table>
The analysis of the attitudes of the county extension directors toward some factors of effectiveness in formal agricultural extension programs, included in section six of the questionnaire, was presented in Table 2.

The data in Table 2 indicate that the county extension directors were more "clientele" oriented in their attitudes. The factor ranked in first place was: "clientele motivation to participate in the program" with a "perfect" mean score of 5.00. The second place factor was "determination of the attitudes of the participants about the usefulness of the program in regard to their personal needs". It had a mean score of 4.80 and a standard deviation of 0.45. Five factors were ranked third, with means of 4.60 and a standard deviation of 0.55. Most of these factors were related to the "process and content" of the programs. Their ranges were between 4 and 5 and stated as important and very important. These factors were: "determination of the program content", "subject matter specialists' participation in planning, implementing and evaluating the program", "county's financial and physical resources", "participant feedback" and "participant follow-up".

Four factors related to the "planning and evaluation" procedures of the program obtained ranges between 3 and 5 (fairly important to very important). Although they ranged from the mid-point upward, perhaps the difficulty mentioned by the county extension directors in the open-ended questions could have influenced their opinion. These factors were: "determination of the objectives of the program", "determination of the teaching methods", "evaluation of the instructors, teaching method(s) and
instructional aids used", and "evidence accepted to determine the accomplishment of the objectives of the program".

Two factors ranked between 2 and 4, (of minor importance to important) with means of 3.40 and 3.20 respectively. They were the "technical knowledge of the county extension professional staff" and "use of resource people from other agencies". A probable explanation of this finding is the high regard that the county extension directors attached to the participation of subject-matter specialists in presenting formal programs as their participation increased the attendance and lend authenticity to the program.

It is recognized that the procedure utilized in this study did not permit categorization of the opinions expressed by the participants as they were elicited through open-ended questions. Under such a circumstance it was difficult to determine limits within the concepts, as they could be stated by the county extension directors with different words and with similar connotations. This was the main reason for assigning a percent value to each concept, although some of them basically were the same. For instance, "verbal evaluation" and "feedback from people" were terms used by different county extension directors, but they probably had the same connotation.

The rankings by the county extension directors of the fourteen factors of effectiveness were compared to the rankings by the jury of experts. Kendall's Coefficient of Concordance (Ott et al., 1978) was used to quantify the relationship between the rankings by the two groups. The fourteen factors were divided into two groups: one group of seven "human"
factors of effectiveness and another group of seven factors considered to be "process and content" factors of effectiveness. The formula used was:

\[ W = \frac{12 \text{SSR}}{k^2 n (n^2 - 1)} \]

where:

- \( W \) is the coefficient of concordance;
- \( n \) is the number of items ranked;
- \( k \) is the number of sets of ranks; and

\[ \text{SSR} = \frac{\sum R^2 - (\sum R)^2}{n} \]

The statistical analyses of the "human" factor rankings and the "content and method" factor rankings have been included in tables 3 and 4 respectively. (Factor descriptions have been condensed in the tables.)

Table 3. Relationship between the composite ranking of "human" factors by county extension directors and jury of experts

<table>
<thead>
<tr>
<th>Factor No.</th>
<th>CED's rank</th>
<th>Jury's rank</th>
<th>Coefficient of Concordance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Knowledge of the clientele needs</td>
<td>5</td>
<td>3.5</td>
<td>.51</td>
</tr>
<tr>
<td>3. Clientele motivation</td>
<td>1</td>
<td>3.5</td>
<td></td>
</tr>
<tr>
<td>6. Technical knowledge of the county extension staff</td>
<td>6</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>7. Subject matter specialists participation in program</td>
<td>3</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>9. Use of resource people from other agencies</td>
<td>7</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>12. Participant &quot;feed-back&quot;</td>
<td>3</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>13. Participant &quot;follow-up&quot;</td>
<td>3</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>
Table 4. Relationship between the composite ranking of "content and method" factors by county extension directors and jury of experts

<table>
<thead>
<tr>
<th>Factor No.</th>
<th>CED's rank</th>
<th>Jury's rank</th>
<th>Coefficient of concordance</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Program objective determination</td>
<td>6.5</td>
<td>1</td>
<td>.53</td>
</tr>
<tr>
<td>4. Program content determination</td>
<td>2.5</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>5. Teaching method determination</td>
<td>4.5</td>
<td>3.5</td>
<td></td>
</tr>
<tr>
<td>8. County's resources</td>
<td>2.5</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>10. Evaluation method used</td>
<td>6.5</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>11. Instructor, method and instructional aids evaluation</td>
<td>4.5</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>14. Determination of participant attitudes toward program usefulness</td>
<td>1</td>
<td>3.5</td>
<td></td>
</tr>
</tbody>
</table>

The relationship between the composite ranking of "human" factors by the county extension director group and the jury of experts, indicated that for the county extension directors, the "clientele motivation" was ranked first, while the jury's rank for this factor was 3.5. Perhaps this may be explained by the importance that the county extension directors attached to the lay people's participation in the programs. For the jury of experts, the technical knowledge of the county staff was ranked first, in almost extreme opposition to the county extension directors, who ranked this factor sixth. This may explain the great importance that the county
extension directors attached to the participation of the subject matter specialists in the county programs. This factor, "participation of the subject matter specialists in programs", along with the "participant feedback" and "participant follow-up" factors were ranked third by the county extension directors, which was the only one that had a close rank to the one of the jury of experts. The other two factors, "participant follow-up" and "subject matter specialists' participation in programs" were ranked sixth and fifth respectively by the jury. The only factor in which both groups coincided in their ranks was "use of resource people from other agencies", which was ranked last. This may be explained by the high regard that administrators and county extension directors have for the technical expertise of extension professionals. Kendall's Coefficient of Concordance was 0.51, indicating a certain degree of concordance between the rankings of the jury and those of the county extension directors, and was not statistically significant.

In regard to the relationship between the composite ranking of "content and method" factors by the jury of experts and that of the county extension directors, the factor that showed the highest discrepancy was the "program objective determination" which ranked last, 6.5, by the county extension directors and was ranked first by the jury. Perhaps, in this aspect, the county extension directors were more "pragmatic" in their opinion while the jury members were more "philosophically" oriented. This might also be explained by the rank that the county extension directors gave to "the determination of the participants' attitudes toward program usefulness" which was first, while the jury ranked
this factor 3.5. "Evaluation method used" was another factor where the county extension directors and the jury had a close concordance, as they ranked it 6.5 and 6 respectively. Another factor was the "program content determination", which was ranked second by both groups. The county extension directors gave more emphasis to the "county resources" factor, which received a ranking of 2.5 by this group, while the jury ranked it fifth. The "teaching method determination" had a rank of 4.5 by the county extension directors and 3.5 by the jury, which was considered close. The Kendall's Coefficient of Concordance of 0.53 indicated, also, a certain degree of concordance between the two groups, but it was not significant.

Analysis of Data

The main findings obtained from the five cases presented have been analyzed and are included in the following pages. The technique used to analyze the information obtained through the interviews was content analysis. Kaplan, quoted by Berelson (1952), says:

The technique known as content analysis... attempts to characterize the meanings in a given body of discourse in a systematic and quantitative fashion.

Afterward, Kaplan and Goldsen, quoted by Berelson (1952), point out:

The content analyst aims at a quantitative classification of a given body of content, in terms of a system of categories devised to yield data relevant to hypotheses concerning that content.
Although this study has not attempted to test hypotheses, but to generate some, the content analysis technique seemed to be appropriate to achieve that objective.

In order to do that, the following aspects have been taken into account:

1. The relevant aspects of each answer given by the five county extension directors were extrapolated from each question.

2. Each aspect was assigned a percent value which depended on the frequency with which it was mentioned by the county extension directors. For instance, if an aspect was mentioned by the five directors, it was assigned a 100% value; if it was mentioned by just one director, it was assigned a 20% value, and so forth.

3. Since the interviews through which the information was collected were based upon open-ended type of questions, some of the directors were more inclusive in their answers than others. Because of that, the percentages in some answers may have been over one hundred percent.

4. Aspects of the content related to "intensity" or emphasis given by the county extension directors to their answers were not considered in the analysis. Therefore, each of the aspects mentioned within each answer were given the same percent value. The differences among them depended upon the frequency in which each was mentioned.
For the presentation and discussion of data throughout the remainder of this dissertation, these abbreviations will be used:

a. CED will stand for County Extension Director;
b. CEC will stand for County Extension Council.

The demographic data have been included in this study not for correlating them with any other data, but for providing some insight into the educational and professional backgrounds of the directors that took part in the study. These data will be helpful in the formulation of some hypotheses.

Main Findings

1. The average time of service in the Iowa Extension Service of the five CED's that participated in the study was 21.8 years.
2. All of the CED's had been involved in extension activities prior to their appointments as directors.
3. All of them were active 4-H club members prior to being appointed.
4. The average time as CED's in their current positions was 16.6 years.
5. Four of them were 4-H leaders and one was a county extension assistant. These were the last positions they held before becoming CED's.
6. The undergraduate Bachelor of Science degrees for the participants were: Agronomy (2); Animal Science (1); and Agricultural Education (1).
The Master of Science degree was obtained by the CED's in the areas of Animal Science (Ruminant Nutrition), Adult Education and Agricultural Education.

Only one CED had had a formal course in administrative management which included administration of county extension programs. The non-formal training by two participants included program planning.

The participants indicated their time was divided as follows:

<table>
<thead>
<tr>
<th>No. of participants</th>
<th>Administrative activities</th>
<th>Subject-matter activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>15 percent</td>
<td>85 percent</td>
</tr>
<tr>
<td>2</td>
<td>20 percent</td>
<td>80 percent</td>
</tr>
<tr>
<td>1</td>
<td>25 percent</td>
<td>75 percent</td>
</tr>
<tr>
<td>1</td>
<td>30 percent</td>
<td>70 percent</td>
</tr>
<tr>
<td>5</td>
<td>x = 22 percent</td>
<td>x = 78 percent</td>
</tr>
</tbody>
</table>

Administrative activities were considered to be those related to office management, staff meetings, budgeting and reporting of activities. Subject matter activities consisted of teaching, consulting with clientele, farmer visits and promoting technical meetings.

The important in-service training courses for CED's were considered as courses related to specific subject-matter, such as animal science, agronomy, farm management, etc., 60%; courses related to administration, such as personnel management, budgeting, and communications, 60%; courses related to informational retrieval systems, computers, 20%; and courses of extension education, 40%.

The aspects of the agricultural extension programs that produced the highest motivation among the clientele were perceived as crop production aspects, 80%; livestock production, 60%; energy crisis aspects,
12. Agricultural extension programs that received the most attention in the plan of work were: crop production, 100%; livestock production with emphasis in hogs, 100%; energy conservation programs, 20%; horticulture, 20%; and economics related to crops, livestock, and farm management, 20%.

13. Characteristics of the CEC members that enabled them to provide an effective contribution to the extension programs were perceived as interest for the council work, 40%; broad-minded members, 40%; knowledge of the functions of the council, 20%; enthusiastic members, 20%; diversity of occupations among members, 20%; creative members, 20%; interested in education, 20%; and strongly oriented to program planning, 20%.

14. All of the CEC members had received training that enabled them to accomplish their functions.

15. The training of the CEC members included: philosophy and objectives of the extension service, 60%; responsibilities of the CEC, 40%; the Land-Grand system, 40%; legal aspects of extension, 40%; the democratic process, 40%; and organization of the county extension office and its relations to the area office and to Iowa State University, 20%.

16. The role of the CED in regard to the CEC functions was perceived as: leadership role to the CEC members, 60%; informative role to the CEC members on budgeting, democratic process, bill approval, etc., 60%; counseling role, 20%; and facilitator, 20%. 
17. The most relevant characteristics of effective CEC members were perceived as: interested in people, 40%; knowledgeable of the democratic process, 20%; interested in extension programs, 20%; high attitude toward education, 20%; be outstanding farmers of the county, 20%; technical knowledge of agriculture, 20%; thinkers, 20%; willing to listen, 20%; receptive to changes in extension, 20%; concerned with the community needs, 20%; and heterogeneity of occupations, 20%.

18. All of the CED's stated that they involved the local producer associations or commodity groups in the agricultural extension programs.

19. Ways in which the local producer associations were involved in the extension programs consisted of: providing ideas to the extension staff members of program planning, 80%; helping to present some formal programs by showing slides of their facilities, cooperating in tours and field days, 40%; sponsoring certain programs, 40%; and promoting the extension programs through the community people, 20%. The most involved local producer associations by the CED's were: pork and cattlemen associations, 80%; seed grower association, 20%; grain elevator cooperatives, 20%; and bankers, 20%.

20. All of the CED's stated that they had some understanding with other local agencies operating in their counties in programs similar to those of extension.

21. The agencies usually involved in understandings with extension in those counties were: Soil Conservation Service, 100%; local vocational agriculture programs, 100%; Agricultural Stabilization Conservation Service, 60%; community colleges, 40%. The most common types of understandings with them were related to: public affairs
programs, 40%; low-income-people programs, 20%; and youth programs, 40%.

22. SEMIS, State Extension Management Information System, was perceived by the CED's as follows: it provides you ideas on your use of time, 40%; not important either in planning, implementation or evaluation of extension programs at county level, 60%; lack of knowledge on how to use it advantageously in program planning, implementation or evaluation, 40%; helpful in program evaluation to some extent, 20%, and is a necessary thing, 20%.

23. When the CED's were asked about their time resources to conduct their programs, two indicated that time was a problem, two others said time was not a problem and one indicated it was at times.

24. Additional responses concerning their time were as follows: Need to do a better job of setting priorities, too many different programs to attend, too many programs during the winter, and one can learn to manage his time effectively.

25. The functions of the CEC's in regard to extension program planning were perceived as providing ideas to the staff, 80%; approving the extension programs, 60%; preparing and adopting programs, 20%; and helping to review the program areas, 20%.

26. The main sources of information for program planning were listed by the CED's as Iowa State University, 20%; community surveys, 80%; clientele's calls, 40%; local producer associations, 40%; program planning committee, 20%; and CEC's, 20%.
27. In regard to the statistics used in program planning the most common were agricultural census, 100%; community surveys, 80%; private company studies, 20%; population census, 40%; and farm magazines, 20%.

28. The procedures commonly used to determine the needs of clientele were provided as: clientele's calls tabulation, 40%; county surveys, 60%; questionnaires after meetings, 40%; extension specialists' idea book, 20%; the commodity groups, 20%; program planning committees, 20%; CEC's, 20%; county leaders, 20%; and other agencies' information, 20%.

29. The factors considered in establishing the priorities for agricultural extension programs were perceived as: clientele's needs and interests, 60%; county staff input, 40%; area specialists, 40%; CEC's, 40%; and production programs, 20%.

30. The contribution of the subject-matter specialists to the county extension program planning process was listed by the CED's as: specialists provide ideas to plan programs, 80%; they discuss with the county staff about program ideas, 40%; they give suggestions and ideas on available programs at the state level, 40%; and they have a better prospective of the problems, 20%.

31. The CED's believed the decision makers on program implementation were: the CED's along with the area and state specialists, 60%; the county staff, 40%; the county extension staff along with the CEC and the area specialists, 20%.

32. The most effective channels of communication to reach the extension's clientele, were given as: radio, 100%; newspapers, 100%; meetings,
40%; one-to-one approach, 20%; individual letter or post card, 20%; and newsletters, 20%.

33. All of the CED's stated that some of their agricultural programs had more attendance than others.

34. The agricultural extension programs that were perceived as having a higher attendance were: crop production programs, especially corn and soybeans, 100%; livestock production programs, especially pork production, 60%; farm management programs, 40%; horticulture, 40%; emergency type of programs, 40%; single-item programs, such as corn-silage preparation, 20%; and gardening, 20%.

35. The value of participation by the subject-matter specialists in the delivery of extension agricultural programs was perceived by the CED's as follows: they provide the latest facts, 40%; area specialists help to present the county programs, 40%; they lend authenticity to the programs, 20%; they have expertise in their fields, 20%; they are unbiased, 20%; they are very helpful in solving people's needs, 20%; their presence in a formal program increases the attendance, 20%; and they have the ability to put research into layman's language, 20%.

36. The contribution by members of the CEC's in the implementation of the agricultural extension programs was as follows: they promote the program across the county, 80%; sometimes they help to present the program, 40%; they provide the necessary tools to carry out the program, 20%; and they provide ideas for the staff to know how they are doing, 20%. 

37. Teaching methods that have demonstrated to be the most effective for the agricultural extension programs were: meetings, 80%; one-to-one basis, 60%; one-day tours and field days, 40%; and to have the farmers presenting the program themselves, 20%.

38. Factors taken into account when deciding upon the time and place to deliver agricultural extension programs were given as: depends on the potential audience, the type of program that is going to be presented, and the month in which it is going to be presented, 60%; depends on the season and the weather, 40%; and depends on possible conflicts of the program with other local activities or county events, 60%.

39. The factors that are usually considered in evaluating the agricultural extension programs were perceived by the CED's as follows: attendance, according to the potential audience, 40%; personal points of view of the people who attended the program, 40%; questionnaires, 60%; personal visual observation, 20%; the number of contact-hours of instruction, 20%; and the type of information provided to the clientele, 20%.

40. Evidence used most to determine the accomplishment of the program's objectives was as follows: feed-back from the people, 40%; CEC members' feed-back, 60%; staff reactions, 40%; verbal evaluation, by talking with other agencies' representatives, 20%; number of people who attended the program, 20% and before-after photographs taken of the clientele's facilities, 20%.
41. The role of the subject-matter specialists in the evaluation of agricultural extension programs was perceived by the CED's as follows: specialists along with the CED verbally evaluate the programs, 40%; specialists help the county staff to determine the evaluation instrument, 40%; specialists help the county staff to determine the evaluation method, 20%; specialists do not participate in program evaluation in the county, 20%.

42. The role of the county staff in the evaluation of programs was perceived by the CED's as follows: they tabulate questionnaires and analyze results, 40%; they verbally evaluate programs along with the CED, 40%; they help to set the stage for evaluation, 20%; they are responsible for encouraging evaluation, 20%; and they participate in clientele's follow-up, 20%.

43. Four of the CED's stated that the same people that participate in program planning take part in program evaluation. Their answers were explained as follows: we get more evaluation from the CEC members than from the program planning committee, 20%; our CEC members help to plan and to evaluate programs, 80%; commodity groups help to plan and to evaluate programs, 40%; CED and county staff participate in planning and evaluation of the programs, 20%; and advisory committees help to plan and to evaluate programs in each area, 20%.

44. In regard to the use of a "follow-up" procedure to determine the adoption of practices recommended by the extension personnel, 60% of the CED's said that in their counties they did use follow-up procedures, 20% of them said that no follow-up procedure was used, and
20% said that sometimes a follow-up procedure was used. Their answers were explained as follows: 40% used surveys to follow-up their clientele, 20% said that not a real follow-up procedure was used, 60% said that in some cases visual observations were used, 20% said that before-after type of photographs were used, and 20% said that formal follow-up instruments were used.

Discussion

The major purpose of this study was to analyze the experiences of a selected group of Iowa county extension directors in regard to some factors related to the effectiveness of county agricultural extension programs through the stages of planning, implementation and evaluation. A second purpose was to determine the attitudes of the county extension directors toward some factors associated with the effectiveness of formal agricultural extension programs. The third purpose was to generate some hypotheses related to the main findings of this study.

As it was an exploratory study in which the case study was the research method used, the small number of cases analyzed does not permit the researcher to make generalizations from the findings of the study to larger populations. However, this study was designed upon the assumption that the different county extension offices of Iowa operate under the same objectives and philosophy, and their human, technical and physical resources as well as the clientele that they are reaching are quite similar. Besides, the organizational structure and operational procedure of the different county extension offices of the state follow common patterns.
The nature of this study deemed it necessary to use a descriptive analysis of the data obtained because the data came from individual and independent cases.

The use of the demographic data included within this study was not to correlate them with any of the other data, but to provide an insight into the educational and professional background of the persons included in the study.

The profile of the CED's analyzed showed that they had an average time of work in the Iowa Extension Service of 21.8 years, with an average time in their current positions of 16.6 years. The tenure in extension work plus the time in their current positions clearly suggest a good deal of professional experience of all of them, who also were active members of 4-H clubs before becoming staff members. Although the nature of the position as CED might indicate a high amount of administrative work, the findings indicated that none of them spent more than twenty-two percent of their total time on administrative duties, leaving the other seventy-eight percent to subject-matter activities. On the other hand, the fact that just one of them had a formal course in administration demonstrates that these functions have been carried out by them on the basis of their experiences on the job. None had an academic background oriented toward the administration field. Their educational backgrounds were centered around agronomy, animal science, and agricultural and adult education. All of those areas were related to some of the aspects through which the extension service accomplishes its objectives. Their work includes many leadership activities with most of them devoted to staff and CEC meetings, office management and public relations as
local representatives of the state director of extension and Iowa State University. This finding supports the bibliographic review in which Blount and Beal (1961) discuss the organizational functions of adult educators.

The importance of crop production particularly corn and soybeans, and livestock production, particularly hogs, was clearly manifested in the findings. Those areas were perceived as the most attractive of the agricultural programs for their clientele. They were important from an economic point of view for most of the people in their counties. Other programs such as those related to the energy crisis, marketing and economics, which were related to production were also perceived as valuable for their clientele. This finding was also reinforced by the fact that all of them coincided in stating that crop production, particularly soybeans and corn, and livestock production, particularly hogs, were the agricultural areas that had received higher attention in their respective plans of work.

The statistical analysis of the factors of effectiveness in agricultural formal programs confirmed the last finding because the factor that ranked first by the CED's was "the motivation of the clientele to participate in the programs". The programs that provided the most motivation were those of economic importance and thus received a higher priority in the different counties' plan of work.

The findings of this study also indicated that all of the CED's attached a great importance to the involvement of lay people in the planning, implementation and evaluation of their agricultural programs. This was particularly noted in regard to the CEC, which was a very important
part of the county's program development. According to the CED's two characteristics of the CEC were particularly important in the effectiveness of their functions. They were the broad-mindedness of their members, and their interest for the council work. These characteristics were signaled by 40% of them. The majority of the directors expressed that they wanted to have CEC's composed of people that thought, discussed and were critical. Two of them clearly expressed that they did not like to have "rubber stamp" members on the council. The findings also revealed that all of the counties had provided specific training for their council members to be effective in their functions. The areas of training were related to the philosophy and objectives of the extension service, the Land-Grant system and the legal aspects of the extension service, including the democratic process through which decisions must be made by the council in approving and/or adopting programs. The findings also revealed the importance of the CED's role in regard to the function of the CEC. Three of the CED's stated that their roles were mostly oriented toward leadership and advisory of the CEC, providing them with current information to help them in the planning process. The important characteristics that the members of the CEC must exhibit were perceived by the CED's as those related to determining the needs of the community and those related to providing ideas and facts for the program development process. These ideas of the CED's are closely related to the one described by Richert (1966), concerning the need for "those persons to be able to relate themselves to the world around them and plan for the general betterment of their peers, rather than just for their own specific problem areas". In this respect, broad-mindedness, concern
for the community needs, and interest in the extension programs were some of the most important characteristics identified by the CED's in regard to the effectiveness of the CEC members.

Other important aspects of the lay people's participation in the agricultural extension programs, were that of the CED's work with local commodity groups. All of the CED's considered their relationship with commodity groups as very important in program planning development because their leaders were important sources of ideas on program planning. All of the CED's mentioned the beef and pork producer associations as well as the crop grower associations as the commodity groups which they had mostly involved in program planning, implementation, and evaluation. They all stated that these groups were always supporters and promoters of the extension programs and their own interests and needs were important in the program planning process. Three of the CED's pointed out that they attended the meetings of the local producer associations and from there they obtained important information and ideas for program planning.

The interagency cooperation mentioned by Mulford et al. (1977), who stated that: "... an organization does not exist as an island, instead there is a relationship between the organization and its environment..." is an important factor within the extension program development, and this was confirmed by the analysis of the different cases. All of the CED's pointed out that they held very good relations with the representatives of other local agencies and had understandings of cooperation with some of them. The data also substantiated that the cooperative base is mostly established in accordance with the similarity of programs and/or the homogeneity of the clientele that the different agencies were serving. The
Soil Conservation Service is one of those agencies in which a close relationship exists. Other important understandings mentioned by all of the CED's were those with the vocational agriculture programs. This finding supports Kelsey's (1963) concept that extension agents are called upon to work with organizations such as production groups, cooperatives and commercial groups and general educational and service organizations.

Sources of information used in those counties for program planning were for the most part local sources, represented in community surveys, clientele feed-back, other local agencies, commodity group leaders and the CEC's input. Two of them mentioned Iowa State University as a primary source of information, although all of them indicated that certain extension programs such as the public affairs programs were planned and organized at state level.

Although all of the CED's stated that they used the agricultural census as a source of information in program planning, one of them mentioned that he used them rarely although he was aware of his county's agricultural statistics, in terms of production, livestock population, number of acres of corn, soybeans, etc. This may be interpreted as an indication of the knowledge of that person of his county after several years of experience in his job. Other important statistics mentioned were those coming from surveys carried out at the local level by other agencies and/or private enterprises, and federal and/or state surveys.

The findings also permitted the researcher to learn that most of the sources used by the CED's in determining the community needs were based upon lay people. In this respect clientele's calls, surveys carried out
with the community, commodity groups and the CEC feedback were considered by them as the most usual.

The idea-book prepared by the subject-matter specialists of Iowa State University was considered an important source of information at the state level, as it brings current information about state situations that may be adapted at a county level.

The concepts of Forest and Mulcahy (1976) concerning the four sources through which extension agents established priorities, namely, the community or society at large, specific clientele groups, the extension organization and the extension workers' own values, and interests and concerns apparently have been supported by the findings of this study which revealed that basically all of them were involved in determining the priorities for the county's programs.

Most of the decisions made in regard to the program planning process were the products of a collective action, carried out by the CEC, or by special program planning committees in two of the counties included in the study. The findings indicated that the final decision in this respect was a responsibility of the CED with the assistance of the county and/or area staff, and in some cases with the assistance of the state specialists. In this process the CEC members' responsibility was more oriented toward the legal approval and endorsement of the programs decided on by them. Obviously, the input provided by the CEC was considered of high importance.

Participation of the subject matter specialists in the planning process of the county program was perceived as a very important factor in the success of the programs. All of the CED's agreed in saying that
the ideas and prospectives about different problems introduced by the subject-matter specialists into the program planning process were quite useful for them to plan successful programs. This concept correlates with those mentioned by Sanders (1966), in which "the traditional functions of the subject-matter specialists had been to serve as a link between the researcher and the agent.... The specialists can also be effectively utilized in problem identification.... In some cases the problem approach requires diagnostic procedures and expertise that is beyond the agent...."

The technical input that subject-matter specialists introduce into the program planning process was also considered of a great importance. One of the CED's stated that the clientele that extension has to help includes people with college degrees who are waiting for the latest information and technology, and the subject-matter specialists were also available to help them.

No less important than the participation of the subject-matter specialists in program planning, was their participation in program implementation. In the views of most of the CED's the specialists provided the latest facts in their fields and gave authenticity to their programs. One of the most interesting aspects mentioned by them was that specialists can put research outcomes into lay people's language. These aspects support the concept of Kelsey (1963) who states that among the duties of the subject-matter specialists, they make "studies to determine successful and unsuccessful methods of organizing and conducting extension teaching in the particular subject-matter field."

The findings of this study have also shown that the so-called "traditional teaching methods" of extension were also the ones that were
considered most effective by the CED's. The highest rated method was meetings, either the formal sit-down, or the outside meetings, such as field days, tours, and demonstrations. However, the one-to-one teaching method, either on a personal basis or through telephone calls, was considered by two of them as the most effective teaching method in terms of the advantages that individual instruction offers to the learner, but it was thought of as time consuming.

Other methods considered quite important to reach large amounts of people were the mass media channels, particularly radio and newspapers. One of the directors emphasized the high level of response that he had obtained from a column he had in a local newspaper during the last several years. The same was mentioned about radio, and apparently the energy crisis was considered as one definitive factor in turning extension programs more toward mass communication methods. The finding obtained indicated that all of them mentioned radio and newspapers as the most effective communication channels which reinforced their previous opinions.

The State Extension Management Information System, SEMIS, has been considered as a tool "to assist decision makers in Extension program management and communication", (Lawrence, 1974). The findings of this study showed that its utilization in the program development process at county level was quite limited, although it was apparently due to a lack of understanding on the part of the CED's about the probable utilization of this system in program development. One of them expressed that the system had some use in program evaluation since the print-outs provided him information about his county's programs. Most of the advantages
attributed to SEMIS were in regard to the information about the use of their time, which was mentioned by three of the CED's. Two of them stated that they hoped in the future to learn how to use the system advantageously. One mentioned that it was a necessary thing as it provided some help in keeping account of the activities carried out, although others mentioned that the information provided to the system was not accurate.

The findings of the study showed that for two of the CED's interviewed time was not a negative factor as the experience in the job had helped them to be selective with their time. Instead, for two others, it was a negative factor probably because, as one of them said, he had not done a good job of setting his priorities. Another director stated that he had too many programs to deal with and he felt the need for more time to attend them. One man indicated that during the winter, when the number of meetings increased putting more pressure on him, he was unable to do a good job of planning and publicizing the programs. The last responses seemed to support the concept of the Program Development Task Force Report (1976) concerning the short-comings of program development, when it said "Program planning is activity oriented, stressing doing things rather than careful planning to select the most appropriate actions...." but obviously a further study about it would be necessary.

Apparently the same basic factors were considered by the CED's in regard to the decision about the time and place to deliver a formal program. The findings showed that three of them considered the audience, the content of the program and the time of the year as the most important factors.
Others considered the availability of subject-matter specialists, which indicated the importance attached to the participation of the specialists in program implementation. All of the CED's concluded that other local activities of importance in the county should be considered when deciding on the time and place to deliver a formal program. The cooperation that they had received from other local agencies was important to them in finding appropriate rooms for programs in which the potential audience was too large to fit in the county extension's meeting room. This was mentioned by most of the CED's interviewed. On the other hand, the cooperation of the CEC members and other lay people of the county in the implementation of the programs was important in their promotion as well as in finding appropriate facilities to present the programs.

The findings of the study also permitted the researcher to know that evaluation was perhaps one of the most difficult parts of the extension program development. Four of the CED's expressed that the limitation of time to plan and carry out the programs did not permit an evaluation process as organized and complete as the planning process. The findings also indicated there was not a lot of consistency in regard to the utilization of evaluation procedures in the different counties. Most of the CED's used personal visual observation procedures, while questionnaires and verbal evaluation were mentioned by forty percent. In this respect the concept of Iverson (1973), that "almost all extension workers operate at "casual every day evaluation" and "systematic observation levels" appears congruent with these findings.

People attendance according to the potential audience as well as the feedback from people participating in the extension meetings, either
through written questionnaires or through verbal reactions were also men­tioned among the usual methods to evaluate the extension programs. They were mentioned by three of the CED's. Feed-back was also obtained from the CEC members who collected information in their respective townships among their neighbors and fellow farmers who attended the meetings. Usually the CEC members of the county lay people were perceived as very common sources of information to evaluate programs.

The data indicated that the different counties used a variety of evidences to evaluate programs. The most common were the personal ob­ser­vation and the verbal evaluation. None of the CED's made specific mention of the changes suggested by Bennet (1976), in the knowledge, attitudes, skills, and abilities of the clientele as a result of the information provided to them.

The participation of the subject-matter specialists in program evaluation was perceived as necessary by four of the directors. Their purpose was to assist the CED's in preparing and determining the evaluation tools and to discuss with the CED's the programs after they were completed. However, all of the CED's expressed the limitations of this procedure since neither they nor the specialists had the necessary time to sit down and discuss each program. One of them expressed that he did not use the specialists in program evaluation in his county.

When speaking about the consistency between program planning and program evaluation in terms of the people that planned and evaluated the programs, four of the CED's stated that in their counties the CEC members participated in both processes, and one of them stated that in his county he obtained more evaluation from the CEC members than from the
program planning committee. Three of them also mentioned that the commodity groups were good sources of evaluation and two of them stated the advisory groups were helpful in evaluating specific areas. This situation appeared to be extremely useful for the extension personnel to determine the direction that they must give to future programs. It also supported the concept of Sabrosky (1965), that "the Extension service is concerned with the changes that may be brought about in the people it works with." The findings of this study also revealed that there are some cases in which changes may be easily measured as they produce accountable results such as yields, increase in production, etc. In other situations, changes do not take place until one or two years later; therefore, the follow-up of the clientele in these cases is difficult and time consuming, according to the opinion expressed by all of the CED's.

In regard to the factors of effectiveness identified through a jury of experts (page 71a and 71b), upon which the first five sections of the questionnaire were developed, they were mostly oriented toward the procedures and resources through which the agricultural extension programs were developed in a county. Thus, the first six factors related to the decision making process in program planning, appeared to be congruent with the literature review, in which Jans (1952), stated that "planning is the process whereby the local people and county extension staff cooperatively arrive at an understanding of the situation in which the people are located, and the real problems in the local situation...." Therefore, the determination of the local community needs, interests, and problems, the collection and utilization of data, and the determination
of reliable sources of information were some of the factors identified by the jury. The preparation of a plan of work consistent with the priorities established were identified as another important factor. The other ten factors were related to the human resources dimension of extension programs. They included not only the experience, and administrative ability of the county extension directors in coordinating the local programs, but also their leadership ability in providing orientation and assistance to the county extension council members. The concept of Ferguson (1974) that "extension administration at any level involves the art and skill of working with the people to accomplish the objectives of the service", agrees with the opinions of the jury. Another group of seven factors was related to the program implementation phase, which considered the adequate use of the communication channels through which the extension clientele was reached as well as the most effective teaching methods. The involvement of the subject matter specialists in the program development process was also another important factor identified. Finally, a group of seven factors were relevant within the evaluation process as a means of determining the impact of agricultural extension programs upon their audiences. Thus, the responsibility to carry out program evaluation, as well as the methods and evidence used to determine the accomplishments of the program objectives, including the "follow-up" of the clientele, were also identified
CHAPTER V. RECOMMENDATIONS AND IMPLICATIONS

Proposal of Hypotheses

Establishing hypotheses for guiding further studies was one of the objectives of this study. It has provided several findings that appear relevant to the development of hypotheses. Thus, it became necessary to identify the most relevant information what it could be used in designing further more definitive studies in county extension program development.

The following hypotheses are proposed for further studies.

1. The experience of a county extension director in his job is positively related to the effectiveness of his county extension council in its functions.

2. The degree of effectiveness of a county extension council in its functions is negatively related to the homogeneity of its members in regard to: a. occupations, b. sex, and c. educational level.

3. Extension programs designed to meet immediate economic needs of their clientele, are positively related to the level of attendance of their clientele.

4. The motivation of the county extension staff in regard to specific programs, is positively related to the motivation of the extension clientele towards the same programs.

5. Extension programs that are planned to meet immediate needs of the clientele are more motivating than programs planned to provide the latest research results with no immediate application.
6. The effectiveness of county extension programs will be positively related to the organization by the county extension director and the degree of participation by subject matter specialists.

7. Effectiveness in the use of time by county extension directors will be negatively related to their degree of involvement and positively related to the degree of delegation of certain functions.

8. The degree of coordination of activities between local government agencies and the Extension Service will be positively associated with:
   a. The degree of acquaintance and sociability of the local directors.
   b. The degree of mutual knowledge of the objectives of the involved organizations by the local directors of them.
   c. The degree of similarity of their programs and clientele.

9. Extension programs that produce tangible quick and/or measurable results, are more motivating for the extension staff to evaluate than programs that produce intangible and/or slow results.

10. Programs that are planned and organized at the county level are more challenging for the county's staff and clientele, than those programs planned and organized at state level.

11. The determination of specific standards in the achievement of the objectives of extension programs will be directly related to the use of evaluation procedures by the county extension staff.

12. The mastery of evaluation procedures by the county extension staff will be positively related to their willingness to evaluate their programs.
13. Extension programs that tend to provide more information than the clientele are able to utilize are negatively related to the motivation of the clientele to participate.

14. If resources are not increased accordingly, the pressure to develop more programs will negatively affect the quality of the existent and new programs.

Suggestions for Further Research

On the bases of the findings obtained from this study, these suggestions seem to be pertinent for further research studies on this or related topics:

1. It is recommended that the hypotheses proposed be utilized in one or several experimental designs, in order to test them through statistical and a more comprehensive analysis.

2. It is recommended that further studies be made using the case study method with county extension council members to obtain their perceptions of the effectiveness of county agricultural extension programs.

3. It is recommended that similar studies be conducted to analyze the experiences of county extension directors in regard to their relationships with local commodity groups, county extension council members and other local government agencies, in order to find out how these experiences may have affected their programs.

4. It is recommended that a study be made to determine the extent of the influence of the perceived factors upon the county agricultural extension programs' effectiveness.
Implications

It is expected that this study may provide further ideas to the people responsible for planning, implementing and/or evaluating extension programs.

It is also expected by this researcher that similar studies with the necessary adaptations may be developed in his home country, Colombia, through which it may be possible:

1. To increase and improve the participation of local community lay people in determining their needs, and in planning possible alternatives to meet them, according to their resources.

2. To determine methods to increase and improve the current systems of technology transfer from the government research centers to the rural areas, through the most effective use of subject matter specialists and change agents.

3. To coordinate actions to obtain an active involvement of the Colombian universities, particularly the regional universities, in the process of development of the rural areas of the country. This may be accomplished by cooperating through their research projects to the development of their representative zones.

4. To identify appropriate systems that would improve the Integral Rural Development Projects, the Colombian equivalent of the United States Federal Extension Service. Particular emphasis may be in the effective use and coordination of resources by the different agencies committed to the common objective of improving the quality of life of the rural population of Colombia.
CHAPTER VI. SUMMARY

The general objective of this study was to identify some factors associated with the effectiveness of county agricultural extension programs through their phases of planning, implementation and evaluation.

The specific objectives were to: (1) analyze the experiences of a selected group of Iowa County Extension Directors in regard to these factors; (2) determine the attitudes of the CED's toward the importance of some factors related to agricultural extension formal programs; (3) provide some hypotheses from the analysis of the findings obtained; and (4) provide some suggestions for further research studies.

The population of interest of this study was county extension directors of Iowa. A sample of five CED's of Central Iowa was selected in accordance with the independent opinion of a jury of five experts, all of them active staff members of the Iowa Extension Service.

Based on the review of literature and with the cooperation of a jury of experts in extension, through a method adapted from the Critical Incident Technique and the "Q" sort technique, the content for the questionnaire through which the information was collected was prepared. The questionnaire was divided into six main section, namely, the county extension director's profile, the county agricultural extension profile, the program planning process, the program implementation process, the program evaluation process, and the agricultural formal programs.

The first five sections contained 46 open-ended questions and the last section contained a 14-item instrument, through which the attitudes
of the CED's about agricultural formal programs were determined by means of a 1 to 5 Likert scale of importance.

This was an exploratory design in which the Case Study method was used. Data were collected through personal interviews of the researcher with the CED's selected for the study. The interviews through which the information was collected were tape recorded in order to collect the complete information. Afterward, the researcher listened to each tape and the most relevant aspects were extrapolated from each response. A frequency analysis was made using the content analysis method. Each response was assigned a percent value in order to obtain some accountable data. The data obtained from the Likert scale instrument were statistically analyzed using means, standard deviations, ranks and ranges of the different factors included.

The result of this study revealed that the average time of tenure of the Iowa Extension Service of the five CED's was 21.8 years, and the average time of tenure in their current positions was 16.6 years. Two directors held B.S. degrees in Agronomy and Agricultural Education, and three of them held M.S. degrees in Animal Science, Agronomy and Adult Education. One of them had a formal course in administrative management, which included administration of county extension programs. Two of them had non-formal training courses in program planning. One of them did not have any training in administration. Apparently the difference in the administrative training received did not have any effect on their effectiveness.

The CED's stated that they divided their time between administrative and subject matter duties. The average of the time devoted to each one
was: 22 percent for administration and 78 percent to subject matter. Administrative duties included those areas related to office management, staff meetings, CEC meetings, budgeting and reporting of activities. Subject matter duties consisted of teaching, consulting with clientele, farmer visits, and promoting technical meetings. The needs for in-service training for CED's was equally perceived between administration and subject matter courses.

The perception concerning the characteristics attached to the effectiveness of the CEC members were mostly oriented toward interest in people, open-mindedness, knowledge of the democratic process, technical knowledge of agriculture and leadership abilities. The study also showed that training was provided to the CEC members in order to enable them to accomplish their functions. The main topics were objectives of the extension service, responsibilities and functions of the CEC, legal aspects of extension, the democratic process and the Land-Grant system.

All of the CED's stated that they involved local producer associations in program development. Pork and beef producer associations were the most involved, and to a lesser extent the crop growers associations. They indicated they had understandings with local government agencies through which some programs were cooperatively carried out. The agencies that were mostly involved in this understanding were the Soil Conservation Service and the vocational agriculture teachers of secondary schools. The study revealed that none of them had an exact idea on how to effectively use the State Management Information System, SEMIS, in program development and all of them agreed upon the idea that SEMIS was more useful at the state level than at the county level. Two of them mentioned that it
was a good way for them to know how they used their time in the different programs and three of them suggested that the system was not useful in program development. Time management was important to all the CED's and especially so during the winter months when the development and delivery of programs was at a peak.

The main functions attributed to the CEC in regard to program planning were providing ideas to the county staff, approving and adopting programs. The main sources of information for planning were considered the community surveys, the clientele's calls, the local producer associations and Iowa State University. The agricultural census, local community surveys and private agricultural companies were considered as the main sources of statistics for planning their programs. Basically the same factors were considered in determining the needs of clientele. When deciding upon program priorities the clientele needs were considered first, and the staff, subject matter specialists, and the CEC input were considered as secondary factors.

The main contribution of the subject matter specialists to program planning was perceived as providing ideas from the state level and sharing them with the county staff. Their participation was considered quite important for program implementation because that had a wider perspective of the problems.

Radio and newspapers were considered the most effective channels of communication to reach the clientele by all of the CED's interviewed. Meetings continue to be one of the most effective teaching arrangements whether they are formal meetings or field days. However the one-to-one basis was considered the most effective from an educational point of
view, but quite limiting because of the difficulty to reach larger groups of people.

The agricultural programs that tended to provide information and knowledge about crop production were considered as the ones with higher attendance, followed by livestock production, especially pork production and beef production. Accordingly the same programs were given a higher priority in the annual plan of work by the county staff. Emergency programs were unusual but had record attendance of the clientele with figures of around seven hundred farmers per meeting.

The participation of the subject matter specialists in the program implementation process was considered very important as a means to increase the clientele attendance. Specialists were thought of as people that lent authenticity to the programs because they had current information. They also made excellent use of audiovisual materials and put research into the lay people's language.

For most of the CED's the main contribution they received from the CEC members for program implementation was the promotion of the programs and in some cases they cooperated in presenting some aspects of the programs.

Evaluation was considered by four directors as the weakest part of the program development process, perhaps because of the lack of time. The factors that were given highest importance in evaluation were the number in attendance at meetings, depending on the potential clientele, the points of view of the people, information on written questionnaires, CEC members' feedback, and personal observations. Four of the CED's
expressed that the same people that participated in program planning also participated in program evaluation. One of them indicated that he received more input for evaluating his programs from the CEC than from the program planning committee.

Two of them suggested that the specialists along with the CED evaluate the programs, while two others stated that specialists helped the county staff to determine the type of evaluation instrument and method. Just one of them stated that the specialists did not participate in the program evaluation of his county.

Three of the CEO's expressed that they used some follow-up procedure for their clientele, one of them said that he did not use any because of time limitations, and one said that he used one sometimes. Two indicated they used surveys, three said that they used visual observations, one suggested that he used before-after type of pictures, and one said that he used a formal instrument.

The analysis of data of the perception of the county extension directors about some factors of effectiveness of agricultural formal programs is presented in Table 2. Those factors oriented toward determination of the clientele needs and their attitude toward the usefulness of the program, obtained the highest ratings with ranges from important to very important. A group of five factors related to the process and content of the programs ranked in third place. These included the program content, subject matter specialists' participation in the development of the program, county's resources, participant feedback and participant follow-up. A group of five factors were ranked between fairly important to very
important. They wore the knowledge of the council members about the clientele's needs, determination of teaching methods, evaluation of the instructors, teaching method and instructional aids, and determination of the program objectives. The technical knowledge of the county staff was ranked in the thirteenth place and the range spread was from "fairly important" to "important". The last ranked item concerned the use of resource people from other agencies, which had a range of "minor importance" to "important".

A set of fourteen hypotheses was proposed with some suggestions for further research studies.
BIBLIOGRAPHY


ACKNOWLEDGMENTS

I wish to express my deep acknowledgment and personal appreciation to Dr. Harold R. Crawford, Professor and Head of the Agricultural Education Department at Iowa State University and my major professor, for his constant counsel, guidance and direction during my graduate program. The research assistantship that he provided to me during the last six months of my residency at Iowa State University were definitive for the completion of this work.

A special appreciation is expressed to the members of my graduate committee, Drs. Charles F. Foreman, Alan A. Kahler, Richard D. Warren, and John P. Wilson for their assistance and orientation during my graduate work.

I am grateful to the Iowa Extension Service staff members who participated in this study, and to Dr. Roger L. Lawrence for his useful information and assistance to plan this work. Also to Dr. Gary Briers for his important suggestions when preparing the final report.

I wish to thank the Instituto Colombiano Agropecuario, ICA, dependency of the Ministry of Agriculture of Colombia for the leave of absence provided to me for two and one half years in order to carry out my graduate work at Iowa State University.

Special appreciation is also extended to the Organization of the American States, OAS, for the scholarship provided to me for two years and to the Asociacion Colombiana de Facultades de Medicina, ASCOFAME, for the supplementary scholarship provided to me for the support of my family during two years of our residency in the United States.
Most of all, my deep acknowledgment is expressed to my wife, Maria Clemencia, and my children, Andres, Fabio, Jr., Maria Carolina, and Juan Carlos, for their constant encouragement, patience and understanding throughout my graduate program at Iowa State University, which made this work a real pleasure.
APPENDIX A.

LIST OF THE MEMBERS OF THE JURY
OF EXPERTS IN EXTENSION
Members of the Jury of Experts in Extension

Dr. Ronald C. Powers, Assistant Director of Cooperative Extension, Iowa State University, Ames, Iowa.

Dr. Roger L. Lawrence, Professor and Coordinator of Extension Personnel Training, Iowa State University, Ames, Iowa.

Mr. William G. Zmoleck, Professor and Extension Livestock Specialist (Beef Cattle and Marketing), Iowa State University, Ames, Iowa.

Mr. Roger D. Iverson, Area Extension Director, Sioux City Area, Sioux City, Iowa.

Mr. Lyle R. Mackey, Area Extension Director, Mason City Area, Mason City, Iowa.
APPENDIX B.

LIST OF THE PARTICIPATING COUNTY EXTENSION DIRECTORS
Participating County Extension Directors

Mr. James R. Christy, CED, Story County, Nevada, Iowa.
Mr. C. Lynn Habben, CED, Hamilton County, Webster City, Iowa.
Mr. James D. Johnson, CED, Hardin County, Eldora, Iowa.
Mr. Norman W. Moklestad, CED, Humboldt County, Humboldt, Iowa.
Mr. Edward E. Neven, CED, Marshall County, Marshalltown, Iowa.
APPENDIX C.

QUESTIONNAIRE
Survey of Factors Associated with the Effectiveness of the County Agricultural Extension Programs

Interview Questionnaire

SECTION ONE

The County Extension Director's Profile

1. How long have you been working for the Iowa Cooperative Extension Service?

2. Were you involved in the Cooperative Extension Service before becoming a staff member?

3. If your last answer was yes, would you explain what kind of involvement you had in Extension?

4. How long have you occupied your current position?

5. What position did you occupy in Extension before becoming a County Director?

6. What is the highest degree that you hold?

7. What was your major for your Bachelor of Science degree?

8. What was your major for your graduate degree?

9. Have you had training in Administrative management or some related areas?

10. If your last answer was yes would you explain what were the main topics included in your training?

11. In regard to your role as a County Extension Director, approximately what percentage of your daily activities is related to administrative aspects and what percentage is related to technical (subject matter)?
   Administration _____%  Subject Matter _____%

12. According to your personal experience on the job, what kind of in-service training courses would be useful for a County Extension Director to take in order to accomplish his functions more efficiently?
SECTION TWO
Factors Related to the County Agricultural Extension Profile

13. What aspects of your county's agricultural extension program seem to produce a higher motivation for participation by clientele?

14. What agricultural program components have received the most attention in your current annual plan of work, in accordance with their importance?

15. What are the most important characteristics of your county extension council that enable them to make an effective contribution to your Extension Programs?

16. Have the members of your county extension council received training that enables them to accomplish their functions more efficiently?

17. If your last answer was yes, would you explain what activities were included in that training?

18. What is your role in regard to the functions of the county extension council?

19. According to your experience, what are the most relevant characteristics of county extension council members in order for them to be effective in their role?

20. Do you involve the local producer associations in some aspects of the agricultural extension program development?

21. Would you explain your last answer in terms of how you involve them, or why don't you involve them?

22. Do you have an understanding with other agencies working in your county in providing for services similar to those of Extension, in regard to a mutual cooperation for some of your programs?

23. Would you explain your last answer in terms of what kind of understanding you do have with them or why you don't have an understanding with them?

24. What do you think about SEMIS (State Extension Management Information System), in regard to your county's Extension program development? (Is it important in planning, implementing and/or evaluating your programs?)

25. Is the lack of time a frequent negative factor in the effectiveness of your county's agricultural Extension programs?
26. Would you explain the reason(s) for your last answer?

SECTION THREE
Factors Related to the County's Program Planning Process

27. What are the functions of your county extension council in regard to Extension program planning?

28. What are the main sources of information used in your county to make decisions in regard to extension program planning?

29. What kind of statistical information is usually utilized in your county by the extension council or the extension professional staff to make decisions on extension agricultural programs?

30. What procedures or methods are commonly used in your county to determine the problems and needs of your clientele?

31. What factors are considered in your county in establishing the priorities for agricultural extension programs?

32. What contribution does your county receive from the subject-matter specialist when planning agricultural extension programs?

33. When the objectives for a formal agricultural extension program have been determined, what people are responsible for deciding on the program content, teaching method(s), audiovisual materials needed and the best place and time to carry out the program?

SECTION FOUR
Factors Related to the County's Program Implementation Process

45. What channels of communication are the most effective in reaching the extension clientele of your county?

35. Are there some agricultural extension programs which usually have more attendance than others?

36. If your last answer was yes, what aspects of those programs seem to increase the number of participants?

37. How does the participation of the subject-matter specialists affect the program implementation phase of your county's agricultural extension program?
38. What contribution does your office receive from the county extension council in regard to the implementation of the agricultural extension programs?

39. What teaching methods seem to be the most effective in the delivery of your county's agricultural extension programs?

40. What factors are usually taken into consideration when deciding upon the best time and place to deliver a formal agricultural extension program, in order to obtain a good attendance by the target audience?

SECTION FIVE

Factors Related to the County's Program Evaluation Process

41. What factors are usually considered in your county to evaluate the agricultural extension programs?

42. What evidence(s) is utilized to determine whether the program objectives were accomplished?

43. What is the role of the subject matter specialist in the evaluation of agricultural extension programs?

44. What is the role of the county extension professional staff in evaluating those programs?

45. Do the same people that participate in the program planning process participate in the program evaluation process of the agricultural extension programs?
   yes____ no____ (Would you explain your answer, please?)

46. Is there a "follow-up" procedure in your county to determine the extent to which the clientele of your agricultural extension programs adopt the practices recommended to them?
   yes____ no____ (Would you explain your response in terms of how the procedure is carried out, or, why don't you use one?)
SECTION SIX

Factors Related to the Formal Agricultural Extension Programs

According to your experience please express your opinion about the level of importance of the factors or criteria listed below, in regard to the effectiveness of the formal agricultural extension programs in your county. In order to do so, write a number in each of the spaces provided at the right side of this sheet in front of each factor in accordance with the following scale:

1 2 3 4 5
not of fairly very important important important
of minor important
importance

FACTORS

<table>
<thead>
<tr>
<th>FACTORS</th>
<th>LEVEL OF IMPORTANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Knowledge of the extension council members about the clientele's needs.</td>
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<tr>
<td>2. Determination of the objectives of the program.</td>
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<tr>
<td>3. Clientele motivation to participate in the program.</td>
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<tr>
<td>4. Determination of the program content.</td>
<td></td>
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<tr>
<td>5. Determination of the teaching method(s).</td>
<td></td>
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<tr>
<td>6. Technical knowledge of the county extension professional staff.</td>
<td></td>
</tr>
<tr>
<td>7. Subject matter specialists' participation in planning, implementing, and evaluating the program.</td>
<td></td>
</tr>
<tr>
<td>8. County's financial and physical resources.</td>
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<tr>
<td>9. Use of resource people from other agencies.</td>
<td></td>
</tr>
<tr>
<td>10. Method of evaluation used to determine the accomplishment of the objectives of the program.</td>
<td></td>
</tr>
<tr>
<td>11. Evaluation of the instructors' teaching method(s) and instructional aids used.</td>
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</tr>
<tr>
<td>12. Participants' feedback.</td>
<td></td>
</tr>
</tbody>
</table>
13. Participants' follow-up.

14. Determination of the attitudes of the participants about the usefulness of the program in regard to their personal needs.

THANKS FOR YOUR COOPERATION
APPENDIX D.

CORRESPONDENCE WITH THE MEMBERS OF THE JURY OF EXPERTS IN EXTENSION
Dear

A Ph.D. research study is being conducted at Iowa State University which has been designed to analyze some of the factors associated with the effectiveness of county agricultural extension programs.

The study attempts to be different as it is looking for the personal perception of the extension workers who are responsible for planning, implementing, and delivering the agricultural programs at the county level.

One of the first steps of this study is to analyze the opinions of a panel of extension staff members. Their long experience and knowledge of extension work will be an important basis on which the questionnaire to elicit the opinions of the county personnel will be prepared. This is the main reason we have selected you as a member of the panel of extension experts. Will you please help us by answering some questions in a personal interview? We will arrange an appointment with your secretary for a time and date for this interview at your office which will last for approximately one hour.

Enclosed is a listing of eight questions which we will discuss with you during the interview. Thank you for your cooperation in this study.

Sincerely,

Harold R. Crawford
Professor and Head
HRC/FR/1ah

Fabio Rodriguez T.
Graduate Student

Enclosure
Dear

This letter has the purpose of thanking you for providing us your time and sharing with us some of your knowledge and experiences in regard to the Cooperative Extension Service work of Iowa.

The information that you provided through our personal interview has been quite important for us in preparing the final questionnaire that will be administered to five County Extension Directors that have been selected to participate in this study.

Sincerely,

Fabio Rodriguez
Graduate Student

Harold R. Crawford
Professor and Head

FR/HRC:lah
APPENDIX E.

CORRESPONDENCE TO THE PARTICIPANT
COUNTY EXTENSION DIRECTORS
Dear

A research project for a Ph.D. dissertation is being conducted at Iowa State University in order to analyze some of the factors associated with the effectiveness of county agricultural Extension program development in Iowa.

The research method that will be used is known as a Case Study. In accordance with this technique, the population sample is selected according to some particular characteristics of it. In this study the characteristic that is looked for is "effectiveness of the agricultural extension programs". The population is composed of Iowa County Extension Directors, and the sample has been selected from counties located in central Iowa, in the Des Moines and Fort Dodge areas.

In order to select the sample a jury of experts composed of five Iowa Extension Administration staff members was used. Each was asked to choose the county extension directors of the mentioned areas which, in his opinion, had the most successful agricultural programs in their counties. Afterward, the definitive sample was randomly selected from the counties that obtained the higher number of votes, and yours was one of them. This is the reason we are writing this letter to you, in order to ask for your cooperation in this study.

The cooperation we are asking you to provide is to have a personal interview in your office, according to an appointment previously arranged, with the graduate student responsible for this study, and answer a questionnaire that he will take along with him. It is anticipated that the interview will require about two hours, but probably less, and it will cover two main aspects: 1. some questions about your personal background and experience in Extension and 2. some questions related to the Program Development process in your county.
The questionnaire will contain both closed and open end questions. We specifically want you to tell some of the experiences that you have had in regard to the agriculture program development process in your county in the phases of: planning, implementation and evaluation. In order to facilitate the collection of information and save time during the interview, this will be recorded on tape.

Neither your name, nor your county's name, will be identified with your answers in the report. Therefore, your county will be randomly assigned a code to be identified, as well as the other counties included in the study. In order to facilitate your responses during the interview we will send you, in advance, a copy of the questionnaire that will be used. You may want to prepare a draft of your responses before the interview. Also, in this way, you will have some time to look for information or data that you may want to refer to in some of your answers.

We want to thank you for your cooperation, which will be of utmost importance for this study.

Sincerely,

Fabio Rodriguez T.  
Graduate Student  
Ag. Education, I.S.U.

Harold R. Crawford  
Professor and Head  
Ag. Education, I.S.U.

Roger L. Lawrence  
Coordinator of  
Extension Personnel Training, I.S.U.

FRT/HRC/RLL:lah
Dr. Crawford and I would like to thank you for your help and cooperation in our research project on County Agricultural Extension Program Development. I learned much information from you and know that you have a successful program. It was nice to visit with you and to obtain the information from you on a case study basis.

I'll be using the information for my Ph.D. dissertation and also, I want to use the ideas in my home country of Colombia.

Sincerely,

Fabio Rodriguez T.
Graduate Student

Harold R. Crawford
Professor and Head

cc. Dr. Roger Lawrence
Coordinator of Extension Personnel Training
APPENDIX F.

CLEARANCE FOR USE OF
HUMAN SUBJECTS IN RESEARCH
INFORMATION ON THE USE OF HUMAN SUBJECTS IN RESEARCH
IOWA STATE UNIVERSITY
(Please follow the accompanying instructions for completing this form.)

1. Title of project (please type): A study of factors related to the development of County Agricultural Extension programs in Iowa

2. I agree to provide the proper surveillance of this project to insure that the rights and welfare of the human subjects are properly protected. Additions to or changes in procedures affecting the subjects after the project has been approved will be submitted to the committee for review.

Fabiok Rodriguez-Torres
Typed Name of Principal Investigator
223 Curtiss Hall
Campus Address
294-5872
Campus-Telephone

11-6-79
Date
Signature of Principal Investigator

3. Signatures of others (if any) Date Relationship to Principal Investigator

4. ATTACH an additional page(s) (A) describing your proposed research and (B) the subjects to be used, (C) indicating any risks or discomforts to the subjects, and (D) covering any topics checked below. CHECK all boxes applicable.

☐ Medical clearance necessary before subjects can participate
☐ Samples (blood, tissue, etc.) from subjects
☐ Administration of substances (foods, drugs, etc.) to subjects
☐ Physical exercise or conditioning for subjects
☐ Deception of subjects
☐ Subjects under 14 years of age and/or Subjects 14-17 years of age
☐ Subjects in institutions
☐ Research must be approved by another institution or agency

5. ATTACH an example of the material to be used to obtain informed consent and CHECK which type will be used.

☐ Signed informed consent will be obtained.
☒ Modified informed consent will be obtained.

6. Anticipated date on which subjects will be first contacted: 

Anticipated date for last contact with subjects:

7. If Applicable: Anticipated date on which audio or visual tapes will be erased and/or identifiers will be removed from completed survey instruments:

8. Signature of Head or Chairperson Date Department or Administrative Unit

9. Decision of the University Committee on the Use of Human Subjects in Research:

☒ Project Approved ☐ Project not approved ☐ No action required

George G. Karas
Name of Committee Chairperson

11/18/79
Date
Signature of Committee Chairperson

NOV 12 1979
APPENDIX G.

GLOSSARY
GLOSSARY

Agency. (Local government), government institution.

Clientele. The aggregate of participants who were actual or potential program audience.

Community. People living under a common culture and/or having a geographical focus for some major interests, concerns, activities and/or problems.

County Extension Council. A group elected by county people to make decisions relevant to and assist with program development.

Coordination. A condition in which efforts are joined into common action toward defined objectives with each person, organization, agency and/or department knowing his (or their) function and role in relation to that of others involved.

Development (program). The process of planning, implementing and evaluating extension programs.

Learning. The change in behavior of a person that takes place as a result of stimuli and the individual's reaction to them.

Method. A planned procedure, sequence of experiences, activities or events designed to bring about a desired end.

Need. A situation or condition which, after study, is believed should be changed and the desired change can be brought about in total or in part through an educational endeavor.

Objective. A goal, end, or aim stated in regard to a broad concern, problem, or subject.

Plan of Work. A coordinated and integrated plan of work developed by a planning unit.

Process. A course of action, procedure, or a series of steps leading toward an end.

Professional staff. Extension employees with responsibilities on planning, implementing and/or evaluating extension programs within a determined geographic area.

*Many of these terms were taken from Lawrence (1974).*
Program (Extension). Agreed upon priority needs, concerns, problems and interests that fall within the scope of the Extension unit's responsibilities together with the relevant objectives that are to be achieved within a designated period of time.

Program development. The continuous series of processes which include organizing, planning a program, preparing a plan of work and teaching plans, implementing the plans, evaluating, and reporting accomplishments.

Program evaluation. The process by which evidence or data, objectives, and/or criteria are used as a basis for judgment in determining accomplishments of programs.

Program planning. The process by which people, usually by means of a committee or council, Extension workers and other resource persons determine a program.

State Extension Management Information System (SEMIS). The part of the state management information system data base specifically designed for state and local planning units to collect and analyze Extension program data for utilization in program development and program administration.

Subject matter. The content focus of an objective, set of objectives, activity or activities in the extension program; a field or body of organized knowledge.

Teaching. A process of helping others to acquire knowledge and skills.