

DEVELOPMENT OF A MODEL FOR IMPLEMENTING A
MANAGEMENT BY OBJECTIVES SYSTEM FOR
AGRICULTURAL EXTENSION IN
AFGHANISTAN

By

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CHAPTER I

INTRODUCTION

Each organizational operation requires a desirable procedure for the effective performance and successful achievement of objectives. The necessity for an improved system, to achieve the above goal, has created a striving for an effective managerial and administrative system. The reason beyond this is to utilize the human effort, resources, and energy in such a way as to gain more benefit and advantages from the operation and thus reach the higher level of organizational performance more satisfactorily. The outcome of this aspiration from a recent development in the managerial area is the Management by Objectives (MBO) approach, which provides any organization with a clear understanding of the concept of effective management.

The idea of MBO has been popularized since early 1950. The progress and acceptance of this system by different industries, corporations, and organizations is amazing. Hundreds and hundreds of firms in different businesses optimistically reported the progress which they made under this system. For example, progress and improvement are made in areas such as the following: rise in level of performance, reduction of the cost and rise in the profit, rise in productivity and results, saving of time, motivation of personnel and employees, work simplification, better use of equipment, organizational clarity, inventory control, and improvement in growth of the whole system in terms of projection, etc.

The Management by Objectives approach has been supported by the behavioral science research in terms of personnel motivation. This is especially true when the second level of management share their ideas and opinions with personnel and staff of higher level management. In fact, this sharing of opinion in the process of decision making releases human potential of the lower managerial level personnel when they recognize that they are accepted and worthwhile personnel in the organization. They, therefore, try their best to utilize their efforts and energy mostly in those areas which originate from their own thoughts and opinions and dedicate themselves in the performance and achievement in a more contributory manner.

Dr. William W. Stevenson (25) introduced MBO in the following statement in his foreward (page ii):

Management by Objectives is a system which allows an organization to plan its course of action to assist the individual with contributing to that course and to determine progress toward mutually accepted goals. It provides a mechanism whereby an organization may concentrate its efforts upon a set of priorities which have been mutually determined and broadly accepted. This system allows every individual in the organization regardless of level and responsibility to know what is expected of him, where he may look for guidance and assistance, and who he is expected to coordinate with in his work. The system provides for the progress of the organization towards certain goals and keeps disruption due to both outside and inside change to a minimum.

Purpose of the Study

The basic and major purpose of the study is to develop a model for implementing a Management by Objectives system for Agricultural Extension in Afghanistan.

Problem of the Study

The Department of Agricultural Development and Extension, which is one of the most important divisions of the Ministry of Agriculture and Irrigation, has a significant and contributing role in the development of the national economy. The department has focused its effort on the development of the agricultural sector to improve the quantity and quality of agricultural production through continuous education of farmers with scientifically applied methods of farming and research results. The effort is also made to develop the knowledge of farmers and rural families, which comprise the major segment of the population (85 percent of 17 million total population), in various aspects of life by the introduction of educational programs through all possible facilities, namely, the extension staff, the radio, and other published materials.

Conducting such a broad and most important organizational operation requires effective management practices. Effective management calls for initiative leadership and administration, cooperation of all levels of extension personnel, and involvement of all extension staff in decision making as well as in conducting the designed programs in a more successful way in order to meet those needs which are felt by society in general and by farm and rural families specifically. In addition to this, effective management creates a positive attitude among the staffs to serve truly and honestly the people and the nation with more awareness and pride in operation.

Significance of the Study

It has already been mentioned that effective management is required

for obtaining satisfactory results from the operation of the Department of Agricultural Development and Extension than at any other time. This need is due to the recent change in the system of government from monarchy to republic, which implies that the autocratic type of management should also be changed into participative and democratic type management in which everybody has the opportunity to participate for the willingness of the society and the people with a healthy operation. At the other hand, the complexity and heterogeneity of different agricultural programs (with the main emphasis on an increase in agricultural production as well as helping the farmers and rural people help themselves via useful consultation and training by Extension personnel) demands effective organizational operation.

Similarly, today's programs are thought to be more flexible and should be based on long- and short-range goals and objectives. Programs should be planned and designed with full understanding, awareness, consent, and acceptance of the responsibilities of conducting and performing the programs by each individual according to their willingness for improvement and progress and desire for the welfare of the society. This goal is achieved by the introduction of an effective and productive system of management in which everyone has the opportunity to perform in the organization to replace the traditional system of operation.

One of the choicest and most preferable systems in the managerial area is the MBO system. Due to this fact, the writer of this study thought it most necessary to develop a model of a Management by Objectives system for the Agricultural Extension Service (Department of Agriculture and Extension) in the hope that the study might be a guideline for the administrators of the department to get advantage of the

MBO system and thus increase the performance level and bring about personal and organizational satisfactions.

Need for the Study

This study will be of greatest assistance to administrators, program planners, decision makers, and all levels of managers in the following ways:

1. To familiarize extension planners with various approaches to and concepts of planning and program development.
2. To understand the concept of program development and relative subjects in program development.
3. To better understand the concept and philosophy of the Management by Objectives system.
4. To understand how to facilitate organizational operation by developing scheduled formulated goals and objectives under a system of Management by Objectives.
5. To make understandable the formulation of goals and objectives and performance objectives.
6. To clarify the method and the processes of implementation of the Management by Objectives system.
7. To structure a functional model for developing goals and objectives and achieve successful implementation of them.
8. To better understand the concept and philosophy of decisions and decision making.
9. To fully understand the importance of the decision making process and understand the steps used for improving and implementing effective decision making.

Objectives of the Study

Major objectives of the study included the following:

1. To carefully review current literature dealing with concepts and implementation procedures for Management by Objectives.
2. To synthesize and adopt these concepts and procedures in formulating a model for possible use of Management by Objectives in a system of Agricultural Extension in Afghanistan.
3. To formulate a series of goals and objectives for the production of certain agricultural commodities of agricultural mechanization, plant diseases and pest control, dissemination of agricultural information, and for accomplishing effective professional and technical training of extension workers.
4. To obtain an evaluation and assessment of the formulated goals and objectives from two juries--one a group of international students studying agriculture at Oklahoma State University and the other a group of professional staff members at Oklahoma State University.
5. To project suggestions for implementation of the model in Afghanistan.

Limitations of the Study

1. The study is limited to the author's efforts in (a) reviewing, (b) analyzing, (c) synthesizing, and (d) evaluating selected literature and data pertaining to the Management by Objectives system, to decision making processes and Extension Service program development, and to the implementation process in Management by Objectives. Data gathered from jury members was limited to members of the faculty at Oklahoma State

University and to selected international students attending the university at the time the study was conducted.

2. Because of the relatively new organizational structure of the Afghanistan Extension Service, only the present general objectives of the organization are used for a theoretical framework for this study.

3. No attempt was made to test the projected objectives except through submission to a jury composed of available faculty members with experience in program development and international students serving in positions of leadership in agricultural extension and/or education.

Methodology and Objectives of the Study

For the development of this study, the writer proposed as a first step to study the Management by Objectives system and its relative subjects--decision and decision making process, planning and agricultural extension program development--via a comprehensive review of literature. For this purpose related material about the subject, such as books, pamphlets, and journals available both in the Oklahoma State University Library shelves or in the author's personal library, were carefully reviewed. In addition to that, several professors at Oklahoma State University were contacted for securing needed information. Furthermore, materials which were obtained from Afghanistan were also reviewed and used in this study.

In the second step a model of implementation of the MBO system was developed. The model has the necessary steps which are required in the implementation of such a system. As a third step the writer submitted the projected goals and objectives for agricultural extension so formulated to a jury of experts for their review and evaluation. This

jury was composed of 18 Oklahoma State University and Vocational Education professors who presented their views with regard to

- (1) Management by Objectives system, (2) information of objectives, and
- (3) program planning in agricultural extension and/or education.

Similarly, these projected goals and objectives were submitted to a small group of international students from different countries of the world to review and evaluate from their points of view. In addition, these formulated goals and objectives were submitted to Afghan students at Oklahoma State University, most of whom were well aware of the Agricultural Extension program in Afghanistan.

CHAPTER II

REVIEW OF LITERATURE

The content of this chapter is based on comprehensive review of the literature from various sources. The writer attempted to include as much material as was possible so that it might serve as a good reference for those who might be interested. This chapter has four divisions: MBO, Decision Making, Planning, and Program Development in Extension.

Concept of Management by Objectives

It has been mentioned in the introduction that MBO is an effective system of management. This system enables each organization to select the course of operation in a more productive way and thus raise the level of performance in all managerial areas.

The MBO system is a participative system of management. This implies that both manager and subordinate have the opportunity to develop a plan of short- and long-run objectives. Raia (44) differentiated a participative type of management from the authoritative type. His clue to participative management is MBO, where he believes:

The subordinate should be able to participate with his superior in the setting of goals in respect to his own performance; and that he should be given the information necessary to enable him to compare his actual performance with the goal set and thus to control his own performance himself . . . The role of superior (in participative type management) is essentially one of consultation and review and consists mainly in assisting his subordinate in setting realistic goals for their areas of responsibilities (p. 34).

Management by Objectives has been viewed by several people from different angles. Each has tried to give a value to this system in the modern management area. Humble (20) thinks that the successful operation of a company (organization) is dependent upon the individual performance of managers and their staff under the guideline of planned objectives. He believes that, "MBO provides a system which identifies the objectives and contribution of individuals with overall company (organization) objectives and performance" (p. 41). He gives a short introduction to MBO in this way on page 44:

MBO in essence is a practical approach to the fundamentals of good general management. . . . It bridges the results orientation of the 'quantitative school' and the team work and personal motivation concepts of the behavioral scientists and it helps to develop a forward looking, vital spirit among managers.

Humble explains the MBO system from the company viewpoint. This viewpoint is not different in any other organizational operation as far as the group action and operation is concerned. Because healthy and productive performance is the common goal of any organizational operation, MBO encourages such operation. Olsson (42) stated it this way:

Since people do have the basic drives and managers should not use the excuse for the 'human elements' for failing to apply modern concept of management, a manager necessarily limits himself and his company if he refuses to apply new and perhaps better concepts in his organization merely because he thinks his situation is unique (p. 7).

Knowles (21) called Management by Objectives an effective performance review procedure for the need assessment in the area of adult education. His brief introduction to MBO was stated as follows on page 104:

In its simplest form, this is a process by which each employee develops a plan detailing his short-run and long-run objectives for the operation of his job and his personal development in collaboration with his supervisor. At stated

intervals (usually from three months to a year) he assesses his progress toward each objective with the help of his supervisor, identifies obstacles that prevent their full achievement and prescribes corrective action including further training.

The concept of MBO has been perceived by Dimock (6) as an effective administration. He recognized that institutions grow in size and complexity from time to time. This complexity and growth require the "management" to redouble its effort to "administrate by objectives" to offset the loss of vitality due to inherent bureaucratic influence. The philosophy of administration by objectives is "consistent with democracy and it is only one that seems to promise relief from the effect of bureaucracy." To Dimock this system means the involvement of all "key people" of the organization in the determination of objectives, working out of the plan and policies, and in the formulation of detailed plans of operation under this system the full use of individuals' best talents is called and revealed (6).

Definition of MBO

A brief view to the concept has been given so far to MBO. It seems necessary to define MBO. The following definitions are given to MBO by various proponents of this system. These definitions may help to give a further explanation to MBO.

Mali (30) explains MBO as a "strategy of planning and getting results in the direction the management wishes and needs to take while meeting the goals and satisfaction of its participants" on page 1. His definition of MBO in its very shortest form is stated as follows: "It is blending individual plans and needs of managers toward a large-scale accomplishment within a specific period of time" (p. 2).

Humble (20) defines MBO in the following statement on page 43:

"MBO is a dynamic system which integrates the company's need to clarify and achieve its profit and growth goals with the manager's need to contribute and develop himself."

Odiorne (41) on page 12 defines MBO as follows:

. . . A process whereby the superior and subordinate managers of an organization jointly identify its common goals, define each individual's major areas of responsibility in terms of the result expected of him and use these measures as guides for operating the unit and assessing the contribution of each of its members.

Leverenze, et al. (25) stated the definition of MBO systems in this way on page 1:

Management by objectives is a system which enables an organization to plan in advance what that organization desires to accomplish within a specific period of time . . . It is a system whereby managers assist subordinates in planning their work, meeting their objectives and reviewing their performance so that they may achieve optimum job results, and in so doing, assist in the accomplishment of the overall goals and objectives of the organization.

MBO is defined by Olsson (42) as follows: "MBO is a system whereby the organization objectives are made directional guides for the entire activity."

Reddin (45) has a definition for MBO on page 12 and that is:

The establishment of effective areas and effective standards for managerial positions and the periodic conversion of these into measurable time bounded objectives linked vertically and horizontally and with future planning.

Also on page 12, Reddin states that MBO is a "method of associating objectives with positions and linking these objectives together and with the corporation plan."

The following last definition of this study is quoted from Levinson (26). He calls MBO a process and defines it as follows:

The MBO process, in its essence, is an effort to be fair and reasonable to predict performance and judge it more carefully and presumably to provide individuals with an opportunity to be self motivating by setting their own objectives.

The above definitions of MBO which are given by different people have some common elements. These elements could be noticed as:

1. Providing opportunity for both manager and subordinate to share their ideas together in better planning.
2. Setting objectives to be achieved in a specific period of time.
3. Linking and blending the objectives in a more productive manner which can be measured.
4. Objectives are future-oriented with the full consent of both manager and subordinate.
5. Motivation and enthusiasm of involved personnel in better management.

Why MBO?

It is obvious that there is dynamic tendency for implementation of MBO systems by different companies and organizations. This tendency exists not only in the United States but also all over the world (45), and it is accelerating (18). This implies that there are some advantages in this system that modern management tends to ask for such a system in any managerial area, in both companies where they are profit-oriented and public organizations where they are service-oriented.

Numerous optimistic statements could be noticed in MBO literature that give a supportive view for the implementation of MBO in modern management systems. Yet it is believed that the concept of MBO is steadily developing.

Mali (30) believes that this concept will remain for some time in the future and supports this assumption with a number of reasons. First, management practitioners themselves are increasingly concerned with improving their own effectiveness. Second, initial success in using managing by objectives has spurred additional effort toward clarification and refinement. Third, "managing at distance" (decentralization and delegation) is now recognized as a way of managerial life. Fourth, organizations now recognize that managerial talent is the crucial component in the perpetuation and profitability of the enterprise.

MBO is not a very complex system, but it simplifies and gives meaning to a vast mass of information. This system emphasizes identification of goals of the organization and then asks for orderly procedure for the distribution of responsibilities among individuals in such a way that their combined efforts are directed toward achieving the goals. Unlike some other management systems, this system assumes that since the managerial behavior is more important than managerial personality that therefore this behavior should be defined in terms of results rather than giving some common goals for all managers of common methods of management (39).

Due to this fact a tremendous progress, which is the main purpose of an effective management, would be made in each managerial area, and the MBO system stresses this.

MBO encourages collective decision making. Each individual has a basic drive and desire to have a freedom in order to express himself and to show his ability in performing and doing things. Yet this desire is not satisfied unless the others accept him as capable. This could be a type of motivation that causes each individual to try his best to do something acceptable to his colleagues and friends.

Similarly, the manager (beyond his bossing) and subordinate (beyond his subordinating) have the desire to work together. People in any organization not only have a desire to do work individually but also to do work with others and share their activities with each other in a more productive manner. By this action there is provided opportunity to achieve satisfaction and effectiveness as people work together, for man, asserts Olsson (42), is a gregarious animal.

From the other side, individuals will enjoy working when they have the right to do so. Olsson (42) further pointed out that he had concluded that the most satisfying type of labor is that which one performs for his own individual enjoyment. He further quoted Gore's (15) maxim to the effect that when a man works in his own flower garden, he is undoubtedly stimulated by his anticipation of continuing enjoyment of the beauty his work is producing.

The participative position of the subordinate in programming, which is significant in the MBO system, has an important role in performance, for, in part, one who proposes some ideas will be well able to know how to practice them. This means that there will be less confusion for one who knows the nature of the subject that he is going to exercise than the one who attempts to follow others' opinions originated from somebody else's frame of reference. It sometimes happens that the same thing may be interpreted differently by others and be perceived in a different way. Carroll and Tosi (4) explain the importance of participation in performance level and state on page 7:

Participation can strengthen agreement among participants and this mutual understanding may continue past the discussion period There is considerable evidence to support the notion that job satisfaction increases with participation.

They further reviewed additional research studies and reported that many studies show a positive relationship between the extent and nature of participation and the amount of involvement in the actual establishment of goals by subordinates. They also assert that since MBO as a system stresses participation, this may lead toward effectiveness because, ". . . more participation leads to more discussion, which in turn leads to better problem identification" (4, p. 8).

MBO Helps Improvement of General Management

Development of organizational structure, due to complexity of operation, requires a system to coincide and match the situation and to handle the problems in a more effective way. Due to this fact, more organizations are likely to cling to a new type of management which seems to be a better solution to the problem. Hea (16) clearly points out some of the problems that may lead a company to embark on MBO and then states his conviction that in the process of installing MBO an organization tends to eliminate unclear areas of responsibility and maintains that such streamlining creates an environment enabling managers to operate more effectively.

We may add that MBO gives a high degree of clarity to the normal management functions of planning and control: "Managers are much more likely to achieve whatever they set out to achieve because targets are better defined" (30, p. 5).

The impact of MBO toward improvement of general management is noticed by the 3-M Company. The company reported, "By using the approach of MBO at all levels of supervision, a clarity was brought about in the mission and the results of the unit" (30, p. 5). The

company further noted the following:

(MBO) tended to eliminate the 'political' atmosphere, that is, the need to try to guess what the boss wants and how far to go in an attempt to please him no matter what he seems to want. . . . MBO also estimated the confusion in direction that formerly ensued when there was a turnover in management at the higher level (30, pp. 5-6).

MBO is job performance oriented rather than authority oriented.

Under this system each individual has clear job responsibility which he is accountable for. The authority of top manager, which is sometimes probably due to manager selfishness or prejudice, will likely not greatly influence the healthy operation under the MBO system, while otherwise the subordinate may come under direct and indirect influence of the boss and thus he will follow the same track which his boss follows. Hea (16) even goes so far as to posit the assertion that MBO has led to better delegation and to less interference by the boss. Relationships of workers with their bosses often improve and they will be more likely to look to their superiors for help and advice when needed. In addition, Hea looks for the boss to develop more confidence in subordinates and thus be more prepared to adopt a counseling rather than the more conventional autocratic role.

In the case of confidence of the manager in subordinates, most authorities say that "confidence creates confidence" and "trust begets trust." Therefore, under conditions conducive toward mutual confidence and trust, efforts of both manager and subordinate are concentrated toward better performance rather than the subordinates defending themselves from the fear and threat so often accompanying an autocratic type of management.

MBO develops a positive relationship between subordinate and superior. Both subordinate and manager discuss the problem, attempt to

find the better alternatives for effective performance, as well as mutual planning and decision making, and set goals. Both of them have a common goal; that is, better performance, and this develops a good relation based on full confidence and trust between them. This may also lead toward full understanding and acceptance by the subordinate of his need for further training.

MBO brings motivation. We discussed that participation and good performance is a self-built motivation. Under MBO the subordinate will find it more convenient to suggest his ideas and opinions and propose those items that seem important to him. This curiosity of the subordinate develops further when his idea is accepted by the manager, who attempts to release the subordinate's potential via encouragement and enthusiastic attitude. The subordinate is also motivated when his proposed plan gives good results. In this case the subordinate attempts further to cling to any possible alternative which he thinks may bring further improvement to his performance. Motivation in the MBO system, therefore, is a continuous process.

Mali (30) has this comment on motivation of the subordinate by participation on page 8:

It gives the subordinate an opportunity to contribute his ideas which heightens his sense of worth, recognition and motivation. When this opportunity is offered deliberately and systematically, motivation and enthusiasm can be intensified to even higher levels. This in turn tends to stimulate further participation in improvements since the individual feels and knows his ideas, efforts and contributions may have a significant impact on the organization.

Olsson (42) believes the following:

Involvement of people is essential to motivation. When the person is helped to integrate his own objectives with those of the organization, the most effective basis for positive motivation is created (p. 29).

Reddin (45) shares a like opinion with Mali and Olsson and directs attention with an assertion that MBO leads to the manager's being motivated by the job itself rather than solely by the hope of reward or the personality and techniques which might be used by his superior. Many other writers have also documented agreement that Management by Objectives is uniquely motivation-oriented. Throughout this study, and particularly with a concept dealing with MBO and motivation, an inescapable conclusion must be drawn which is well stated as a theory by Ross to the effect that (47, p. 8):

Management by Objectives is proposed as a philosophy of management that will accomplish by objectives to motivate and involve each employee in a way that he will contribute maximum effort toward the accomplishment of organizational goals.

Management by Objectives Asks for a Clear

Goal Setting

The task of goal setting is considered to be an important function of any type of organization and management. Goals give direction for future procedures and operation. Unclear and less understandable goals not only reduce organizational performance in general but also cost money and waste the time and energy of individuals. Therefore, modern management, to avoid this problem, asks for clear and well-formulated goal setting; and obviously MBO is that type of management, because MBO encourages mutual goal setting by managers and subordinates and thus each individual has a clear cross-cut view of his responsibility under a "known destination" in his work.

Research indicates that the level of performance in these cases where there are clear goals set is much higher than the non-existence of clear goals. Carrol and Tosi (4) concluded after carefully reviewing

several research efforts that goal setting has higher impact on performance than mere dissemination of knowledge of results. They thus concluded that goal setting itself increases performance more than does feedback alone. Similarly, Ross (47) concludes that mutual goal setting in MBO insures success because it gives the manager an opportunity to participate in determining reasonable expectations for his own development and also gives the subordinate an opportunity to assist the manager in locating areas of improvement during their discussion of goals. Since setting goals is a challenge for better performance, one who sets the goals, in reality, shows his preparedness for improved performance through achievement of goals in the future.

MBO Facilitates Appraisal and Evaluation

MBO emphasizes setting goals and objectives, the latter in measurable terms. In addition to this, the responsibility of each individual under this system is well determined and well known. Therefore, "Performance is judged more accurately since it is based on specific accomplishment within a period of time and not on subjective or generalized opinions" (30, p. 7). Mali (30) believes that MBO provides a self-evaluation system for each individual which he described in this way on page 7:

MBO provides an objective measuring instrument for linking the evaluation of actual performance against expected performance. When the concept is well developed within an organization, the practice of self-evaluation and self-accountability becomes possible. An incumbent is in the position to evaluate the result of his own performance since requirements are clear, specific, and measurable. Willingness to appraise and evaluate subordinate is improved with the concept of managing by objectives.

Mali (30) has also reported that many problems of the Colt Heating Company were solved by the introduction of this system into the managerial area of this company. MBO also eased performance appraisal and avoided waste of time of the company. MBO was ". . . allowing the company to devote 25% of its time to job review--that is, to looking back--and 75% to looking forward" (30, pp. 7-8).

Irregular consumption of time is really a problem in most of the managerial areas, where all staffs in the organization are tied up with appraisal in a specific period of time, while evaluation under the MBO system takes place from time to time. Mistakes are corrected just whenever they happen rather than waiting for "evaluation time" to come. Ross (47) believes that once a goal is established with the desired in terms of level of achievement, an agreement is evident that an individual can measure his achievement continuously by comparing his results with the goal. This provides individuals with self control. In such cases, the person occupies a position in which redirection of his efforts to further goals or achievements is imminent.

Reddin (45) agrees that MBO is a good instrument of performance assessment. He states the following on page 200:

MBO provides a sound method of appraising management performance. A central feature of MBO is a clear method of performance measurement which both superior and subordinate agree is as objective and accurate as possible. With good measurement a better system of rewards for good performance is possible.

There are several other benefits that this system furnishes to an organization. Many of these benefits are posited to various degrees by Humble (18), Mali (30), Odiorne (40), Reddin (45), and Ross (47). In fact, each of these authors is in very close agreement with the others and all form a remarkable consensus.

MBO as a Superior Management System

MBO is recognized as a most acceptable and perhaps superior management system. MBO is distinguished from other management systems by such characteristics as effectiveness in operation, higher performance, personnel motivation and release of human potential, personal and organizational development, etc. To make this system successful, a consistent and continuous effort is required. Humble (19) suggests the following continuous process for a worthwhile MBO system on page 4:

1. Reviewing critically and restating the company's strategic and tactical plan.
2. Clarifying with each manager the key results and performance standards he must achieve in line with unit and company objectives and gaining his contribution and commitment to these individually and as team members.
3. Agreeing on a job improvement plan with each manager, which makes a measurable and realistic contribution to the unit and company plans for better performance.
4. Providing conditions in which it is possible to achieve the key result and carry out the improvement plan, notably an organization structure which gives a manager maximum freedom and flexibility in operation and management control information in a form and at a frequency which makes for more effective self control and better and quicker decision.
5. Using systematic performance review to measure progress toward results and potential review to identify men with potential for advancement.
6. Developing management training plans to help each manager to overcome his weakness, build on his strengths, and accept responsibility for self development.
7. Strengthening a manager's motivation by effective selection, salary and succession.

Similarly, Levinson (26) reported that management by objectives is closely related to performance appraisal and review. To Levinson, an "ideal process" of MBO would intend the following, as stated on page 126:

1. To measure and judge performance.
2. To relate individual performance to organizational goals.
3. To clarify both the job to be done and the expectations of accomplishment.
4. To foster the increasing competence and growth of the subordinate.
5. To enhance communication between superior and subordinate.
6. To serve as basis for judgments about salary and promotion.
7. To stimulate the subordinate's motivation.
8. To serve as a device for organizational control and integration.

Consideration of the above points may help to smooth operation in the system of Management by Objectives.

Implementation of MBO

As an organizational manager or director, one may be confronted with comments to the effect that Management by Objectives sounds good but how about its implementation? Can we implement it in an organization where the management techniques in the organization are different from those more commonly experienced in the formal structure of MBO? The answer to these questions needs careful attention because introducing a new system and replacing the old one is similar to someone's trying to change the behavior of a person. With the introduction of a new system of management the critical problems are that (1) the new system may fail in the very beginning or (2) it may cause some extra problems which make the implementation more difficult; namely, rejection of this system by top administration as well as negative feelings of other personnel in the organization toward this system.

Difficulty or failure in the implementation of MBO may be partially due to the resistance of staff members of an organization to such a system. Certain basic factors which may be posited as reasons for the resistance are suggested by Carroll and Tosi (4) on pages 49 through 52. Briefly, these are listed as follows:

1. Time expenditure: The manager will feel that a lot of time is spent in clearly setting goals with subordinate and reporting them to the superior.
2. Subordinate deficiencies: Some managers may underestimate the competence of their subordinates to use MBO and decision making or rationalize their own willingness to allow additional subordinate involvement and participation.
3. Erosion of authority: Manager will think that participation of subordinate in setting objectives may erode his authority due to the loss of control.
4. Lack of planning ability: Since MBO emphasizes analysis of the future, a reluctant manager may resist MBO.
5. Status of the group proposing the program: Initiators of any new program who are perceived by others to be of low status, low competence, untrustworthy, or who are disliked because of past behavior will have difficulty in gaining acceptance for their suggested programs.
6. MBO as a club: Some managers may feel that MBO is a club used by the organization or superiors to compel them to perform at a higher level than they are able to do; thus they resist MBO.
7. The MBO cycle and work cycle: Incompatibility of the previous system's work cycle and the formal MBO cycle, with the latter asking for a regular evaluation and planning, may cause the manager to develop a negative feeling for the implementation of MBO.
8. Dislike of the performance review requirement: MBO expects performance review according to the goal set and responsibility assigned. If performing feedback 'is not forthcoming particularly with respect to goal set' the manager will be upset and frustrated and concerned with how he is being evaluated. Therefore, MBO creates expectancy for feedback which should be revealed in order to make sure things happen, and the subordinate perceives them as feedback. 'Some managers dislike face-to-face discussion of performance with their subordinate.'

9. Paper work problem: MBO requires documentation of goals and objectives. 'This paperwork syndrome is the easiest rationalization for failing to use MBO.'

Once these "causes to resistance" are understood, one should find out a solution to convince the reluctant manager to implement the MBO system and make him sure that MBO, unlike his perception, does more which is helpful and useful for himself and for the whole program conducted in the organization. This could be done by effective communication.

Before one implements a MBO system, Carroll and Tosi (4) suggested on page 52 that the following be done: "Like any new program MBO must be fully understood; managers must know why and how it works They must both be motivated to use it and have the ability to implement it."

They further suggested that the effort for implementation of MBO should take place in the following phases: "The learning phases" where comprehensive information should be available to explain "what MBO is" and describe management and MBO system, goal setting, and appraisal; "the implementation of MBO" is the phase where the top administration not only okays the implementation but they focus their effort on making a sound program under this system and encourage implementation of MBO according to the policy of this system; the last phase is "the follow-up phase" in which assessment is made to reveal how MBO is used by the manager and uncovers some problems that are still existing in the implementation of the program and some parts of the program which are incompatible with the MBO system (4).

Implementation of the MBO system is a more crucial phase. This is a very important phase for one who assumes responsibility of implementing

MBO, and he must plan very carefully before the implementation phase mentioned above. We therefore may review some suggestions made for implementation of this system to provide background information for implementation of this system. Implementation of MBO, as mentioned earlier, needs a thorough understanding of the concept and purpose of the system. In addition to this, top level management should accept it wholeheartedly as an effective management system, and they should support its implementation. Operation under this system may be crude at the beginning; the top administrator should not be disappointed, but an effort should be made toward improvement of the situation, especially in those areas of the program which are less compatible with the MBO system. This enthusiastic attitude of top management will encourage all other levels of management to practice it with all possible effort. One very important point should always be kept in mind; that is, the implementation of the system should never be imposed on subordinates, but rather more effort should be focussed on explanation and description of the system and thus reduce hesitant attitudes of subordinates toward this system.

Leverenze, et al., (25) recommended some interesting points relative to implementation of the MBO system in an organization. According to her suggestion, once the implementation of MBO is okayed by top management, a capable individual who has enough knowledge about the concept of the MBO system should be appointed to conduct orientation workshops for concerned individuals. He should also be very active in reporting the progress made to the top administration. Then he will conduct more workshops for those who are involved in the implementation of the MBO system. The "director" of MBO, with the help of the top

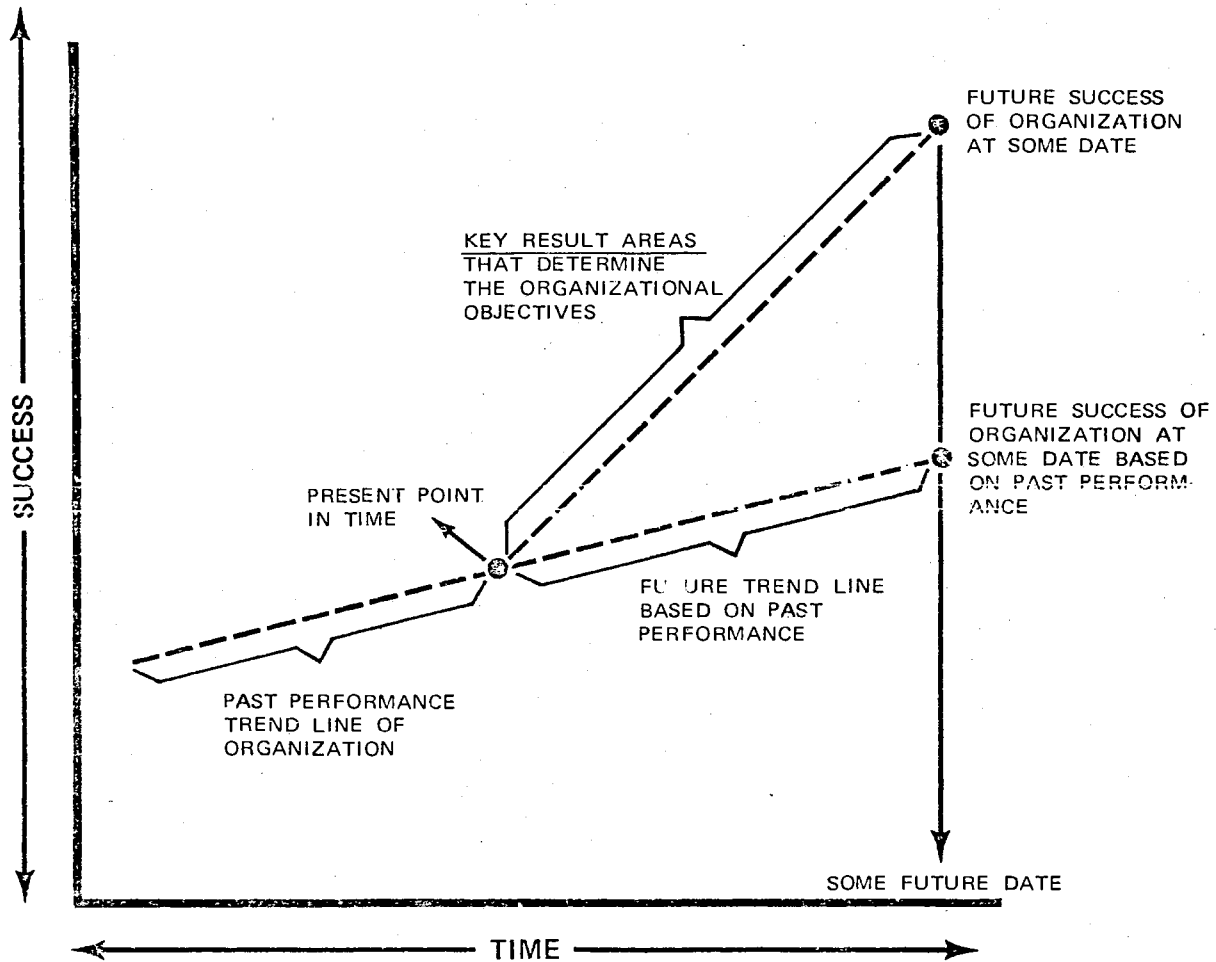
administrator, should be able to appoint a number of knowledgeable persons who are suitable for carrying out the responsibility of the "task force." They are assigned to evaluate the previous performance in order to find out where the organization is and then project the progress of the organization in the future. Figure 1 on page 28 may explain how this analysis of performance appears.

The number of the task force is recommended not to exceed eight persons. Ross (47) on pages 10 and 11 gives some reasons for the number of elective "charter group" (task force) to be limited: (1) Those who are "participating either favor the program now or have an open mind or are willing to try something new," and (2) "The group must remain small enough to be permitted to experiment during the implementation."

Now the task force is to develop recommendations for organizational goals and objectives and submit them to the top management for control. Then the director of MBO will conduct a three-day workshop. In this workshop related subjects of MBO are discussed, but the emphasis is made on orientation of the concept of the MBO system and developing organizational goals and objectives and should allocate enough time for any question brought up by any participant in the workshop. Development of personal job functions and performance objectives should also be included in the agenda of the workshop.

The procedure mentioned above seems to be a good guideline for anyone who attempts to implement the MBO system. The sequences of developing organizational objectives, personal job functions, and performance objectives will be discussed in Chapter IV.

Sometimes it happens that the top management may reject implementation of this system. Under this circumstance, Leverenze, et al., (25)



Source No. 25, p. 9

Figure 1. Planning Graph

recommended another alternative; that is, the director of MBO can implement, if possible, in a small division within the same organization, the MBO program where such implementation seems promising. The success and progress of the MBO system in this small division will encourage both other divisions and top management to commit themselves for implementation of MBO in the other divisions and finally in the whole organization. Yet, it is also possible to select an outside department which is governed by the main organization for the implementation of MBO which the top administration will, consequently, notice the progress under this system and will encourage the implementation of MBO in the mother organization.

Some of the "resistance to MBO" which makes the implementation of MBO difficult was mentioned in previous paragraphs. Some of the other contributing problems and difficulties associated with implementation of MBO are reported by Leverenze (25). They may help one to be aware of them before he proceeds with the implementation of MBO; they are listed as follow on page 57:

1. Lack of commitment by the top administration to support the system.
2. Lack of an adequate data base from which to develop the organizational goals and objectives.
3. Lack of understanding by the participants to grasp the ability to write organizational goals and objectives and personal job functions and performance objectives.
4. Lack of flexibility when implementing the system.
5. Lack of personnel to implement the system and give individual instruction to those participants who need and desire it.
6. Lack of time to implement the system.
7. Lack of accountability or failure to follow up and periodically evaluate accomplishments of the objectives.

Decisions and Decision Making

"You can change your future if you know how" (40, p. 6). Changing the future to prosperity or adversity is the outcome of decisions made by someone.

We make a number of decisions for our routine everyday life. A sport team decides for the improvements of its members; an organization makes decisions on how to develop the organization; a nation makes a decision to make good plans for the solving of domestic and international problems. Finally, decision is everyone's important job in his everyday life; even our life is dependent upon how we decide to change one situation from the other according to our own wishes.

The importance of decision is perceived by Torgersen and Weinslock (51). They believe decision is both the "ending" and "beginning." This implies that the decision maker should be careful to select a "conscious system of decision making" by which he can make up his mind for the "best thing" to do done.

The phenomena so-called the "best thing" or the best alternative is not an entity which has been created in the past, but it is the intellectual outcome of the decision maker and his analysis of the situation according to his knowledge and information.

The decision maker's knowledge, beliefs and attitude, and prejudice are based on his frame of reference. Elbing (11) says on page 15, "What one does at such a time--how he defines a unique situation and reacts to it--will reflect his personal frame of reference vis-a-vis the situation he finds himself." Several times it has been seen that "over-specialization" in the process of program planning or decision making pulled the program according to the decision maker's field of specialty

due to his or her knowledge and beliefs on the specific area of his or her specialization. For example, Millikan and Hopgood (31) perceived that the problem of less development of the agricultural sector in developing countries was analyzed and perceived by each specialist according to his own specialty area. In other words, they found out that each specialist was discussing the failure of agriculture in developing countries according to his own viewpoint in the first level. Each one was giving priority to the solution of his own kind. In a direct approach to this matter, Millikan and Hopgood stated the following on page 5:

Each specialist would find that the factor familiar to him was crucial in the given situation. His perception would then be likely to read, 'Do something about my factor first and the other will follow.'

The problem in decision making with more than one person usually exists. This problem is especially important in group decision making where each group views the subject from its own viewpoint and proposes a solution according to its interest and knowledge. Likert (24) is quite helpful in suggesting that perhaps in such a situation basically each person thinks his solution is best. He further suggests that there likely may be only two courses of action possible, the first being conflict where each person seeks to force his solution on the other, while the second effects a compromise in which each person modifies his solution as little as possible, seeking through bargaining to force the other to make the greater change. But, in such an attempted solution Likert points out that each gives up some aspect of his own preferred solution.

In the case of conflict, the one who succeeded in proceeding with his method of solution is motivated to carry out the solution in higher

rank, but the one who lost is motivated to poorly put the solution into practice. There is also the possibility of sabotage to show that the other's solution was a poor one. In the case of "compromise" neither of them is satisfied with the final solution, and they don't think the solution is a better one. So both of them are motivated to carry out the solution half-heartedly (24).

Likert (24), to solve this problem, has developed a model called "Process for Arriving at a Common Solution," summarized as his advocated three approaches. These are presented in Figure 2.

What Is Decision Making?

In shortest form, decision can be defined as making judgment between alternatives, making up the mind to select an effective course of action. Reference is often made to this as an act involving a choice between or among alternatives. Always involved in reaching a conclusion, which involves determination arrived at after consideration as a result. Decision making ability in its shortest description is simply the art of making choices.

A number of definitions which further discuss the decision and the decision making process are included here. Lundberg (27) said on page 1, "Decisions are the product of collaborative effort of individuals." He gave a definition to decision making and stated further on page 1, "Decision making is a social strategy for mounting a collective response to a problematic situation." To Easton (9) decision refers to a complex process that begins with the recognition of a need for change and terminates with the adoption and implementation of a particular course of action" (p. 70). Gore (15) states on page 130, "Decision

1. Independent approach to achieving a common solution:

a. MY fact	Analyzed and interpreted in terms of MY experience	yields	MY solution which I think is good and to which I am committed
b. YOUR fact	Analyzed and interpreted in terms of YOUR experience	yields	YOUR solution which YOU think is good and to which YOU are committed

2. Coordinated fact-gathering approach to achieving a common solution:

Same facts	Analyzed and interpreted by each person separately in terms of his experience.	yields several solutions, depending on number of persons and range of previous experience. But because of use of same facts solutions are likely to be less diverse than in process 1 above.	One solution achieved by conflict or compromise and with corresponding motivational consequences as stated in process 1. But conflict and compromise apt to be less bitter than in process 1 because solutions are less diverse due to same facts.
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3. Approach based on coordinated fact-gathering coupled with group decision process:

Same fact	analyzed and interpreted by group in terms of experience which is shared in the discussion process. This leads to diverse experience being focused on decision-making processes.	Wide variety of decisions examined but narrowed to one solution.	yields solution based on experience drawn on the sifting and integrating done in seeking the solution. Solution accepted by all as their solution.	Excellent solution, with each person highly motivated to carry it out well.
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Source: 24, pp. 216-217.

Figure 2. Processes for Arriving at a Common Solution

making is in its essence a means of formulating and activating relevant and appropriate collective responses." His definition of decision making stated that, "Decision making is a pattern of interaction between individuals through which the social mechanisms that sustain effective collective activities are developed and maintained" (p. 130). He calls the decision making a collective device for identifying the common stake that individuals have in a situation and for formulating a response (or determination not to respond) to it. More elaborately, "Decision making is a means of collectively structuring the activities and the environment of an aggregate of individuals so that they may collaborate at reasonable cost for the benefits realized" (15, p. 130). Richmond (46) reviews the process of decision making by stating that the process must consist of two important items, the first of which he says must be consideration of a set of alternatives which may be either qualitative or quantitative and the second of which is the selection of the best alternative in order to achieve a goal or objective. He further comments that this may be viewed as optimizing some objective functions.

Each of the above definitions with regard to decision and decision making has an explanatory context. However, the writer has no intention of developing a comparison statement or any type of criticism of one or the other of the definitions included in this theme. But he wishes to affirm that the overall purpose of the process of decision making is to select rationally, not emotionally, among alternatives and in full awareness that the consequences lead the organizational operation toward effective performance and satisfactory results.

Steps in Decision Making

One of the important elements in the process of decision making is the "rationality." It means a conscious and systematic process of decision making. It is well appreciated if the decision maker considers some important points in the decision making process to avoid confusion and illusion as much as possible. Some of the suggested steps in the process of decision making which are reported by qualified authors are included in this study. We hope our readers get some advantage from these suggestions in the implementation of the process of decision making.

Elbing (11) has developed a model which indicates the five steps in the decision making process which are helpful for any decision maker.

The steps are listed as follow on pages 12-13:

1. Identification of a disequilibrium: Observing and becoming sensitive to potential problem situations.
2. Diagnosis of the problem situation: Attempting to understand what is happening in a particular situation.
3. Definition of the problem to be solved: Identifying and stating a problem in relation to organizational and personal goals.
4. Determination of alternative methods and solutions and choice of the best solution: Selecting a course of action from a series of alternatives.
5. Implementation of the chosen solution: The entire process of actualizing the chosen solution.

Elbing diagrammed his model on page 13, and this is shown in Figure 3 on the next page.

Folsom (14) suggests the following steps in the process of decision making to assist the staff people in management:

1. Analyzing the situation to find out if there is a problem.

2. Collecting facts.
3. Analyzing the factors of the problem.
4. Creating new ideas and new ways to tackle the problem.
5. Weighing alternative courses of action.
6. Deciding on a single definite course of action.
7. Following up (p. 4)

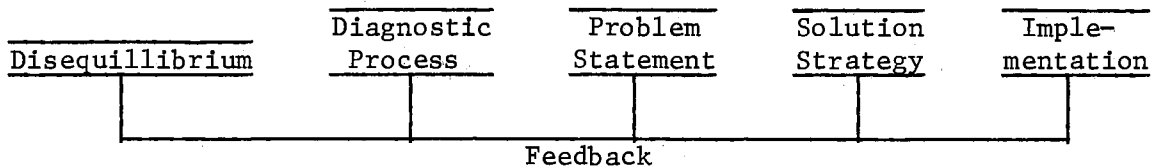


Figure 3. Decision Making Process

The two suggested models show that the authors' views can be recognized as almost parallel. Both agree on recognition, analysis, and diagnosis of the problem as well as eventual solution through selection of better alternatives to the problem. Also important in the congruent models are follow up and feedback.

Again, it should be stressed that decision making is a problem-solution process which requires recognition of an acceptable alternative to accomplish a goal and objective, as more than one alternative usually exists from which to choose. It is the responsibility of the decision maker to search for the best alternative based on his own knowledge and background and making wise use of the experiences of others.

Analysis, identification, and evaluation of alternatives is required for a better decision making process. The following steps of the decision making process have been suggested by Newman (38) on page 3:

1. Recognition of a situation that calls for a decision about what action should be taken.
2. Identification and development of alternative course of action.
3. Evaluation of the alternatives.
4. Implementation of the selected course of action.

Analysis of the situation from various points and dimensions before the process of decision making takes place leads the decision to accuracy. This position is supported by Koontz and O'Donnel (22) who posit as a maxim that the more an individual can recognize and solve for those factors that are limiting or critical to the attainment of the desired goal, the more effectively and efficiently he can select the most favorable alternatives.

The following steps of decision making, originated from a wide range of experience of 300 trainees from various countries of the world, are suggested by Modern Management, A Key (54) on page 37:

1. Get as many facts as possible or feasible.
2. Analyze the facts for accuracy and applicability.
3. If possible get the facts to answer questions.
4. Involve employees in developing solutions.
5. Explore all alternative decisions.
6. Anticipate the consequences.
7. Weigh and balance one alternative against all others and choose the best.
8. Announce the decision promptly or in a timely fashion.
9. Ask cooperation of employees to help put decision into effect.
10. Give reasons if appropriate.
11. Follow up to determine results.

12. If a wrong decision is made, change it as quickly and honestly as possible.

Odiorne (40) proposed some stages of decision making which are included for further explanation of good decision making. They are:

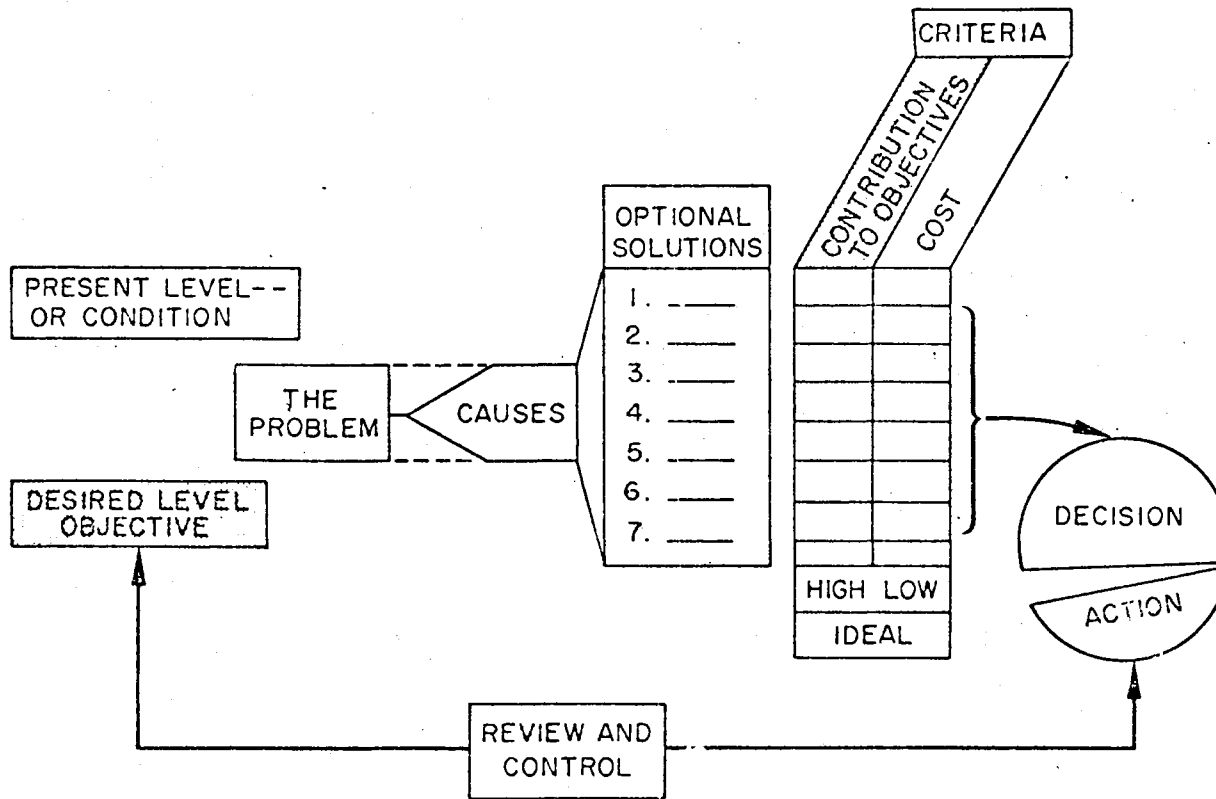
1. Have an objective in mind before making up your mind.
2. Get all (pertinent) facts.
3. Identify the problem and the causes.
4. Develop some solutions with options.
5. Predict the effects and screen your option through criteria.
6. Set up some controls to assure that your decision will work.
7. Get acceptance of your decision (p. 12).

He has also developed a diagram indicating problem solving and decision making which he believes could be used by any good decision maker anywhere. His model is presented in Figure 4.

Lyden, Shipman, and Wilkinson (28) view decision making in the public policy as a process of "(1) seeking information to define the societal problem, (2) developing alternative problem solutions, and (3) reaching agreement upon which alternative will best solve the problem" (pp. 155-156). They are opposed to centralized and autocratic types of decisions. Their detailed explanation of three major steps of decision making in public work is formulated in Table I. This table, which gives an explanatory short statement for each stage of "pre-decision," "decision," and "post decision," may give a good view for those who are involved in decision making in public affairs.

Problem Identification and Selection of Alternatives in Decision Making

As a concept the term "problem" can be defined as "the difference between what we see factually to be the present situation and what we would like to see in order to meet our objective" (40, p. 15).



Source: 40, p. 11

Figure 4. A Model for Problem Solving and Decision Making by Objectives

TABLE I
MAJOR STAGES IN PUBLIC DECISION-
MAKING PROCESS

Pre-decision	Decision	Post-decision
1. Underlying predisposition regarding problem	1. Delineating alternatives	1. Types of responses to decision
2. Recognition of problem	a. Sources of alternatives	2. Role performances of participants involved in implementing decision
3. Event or condition precipitating recognition of need for decision	b. Nature of information used in identifying alternatives	3. Tactics utilized in implementing decision
4. Role performance of initiators	c. Initial expectations of primary actors reporting acceptable outcomes	4. Outcome of implementing decision
5. Mode of initiation	2. Role performances of actors in consideration of alternatives	5. Feedback and modification of behavior
6. Structure of social interaction of participants	3. Mechanisms for decision making (budgets, contracts, executive orders, legislative action, electoral action, and so forth)	6. Time period: implementing of decision
7. Amount of agreement on perception of problem	4. Mechanisms for legitimization (same types of examples as in 3, above)	
8. Time period: from recognition of problem to agreement on need for decision	5. Time period: from development and consideration of alternatives to legitimization of selected alternative	

Practical problem analysis and recognition of a better solution to the problem are the prime goals of the decision making process. It is hardly profitable to ask somebody to diagnose a problem and only give a few theoretical items proposing the solution of the problem. Carelessness in diagnosis of the problem and suggesting some irrational solutions to the problem not only lead the program to failure but also may cause some additional unanticipated problems that in some cases may actually be more serious than the original problem itself. Therefore, to define the problem realistically and find some solutions to it, group discussion and group decision making seems to be strongly indicated.

Realistic decision making gives the opportunity to perceive the problem and the solution from various viewpoints and to propose reasonable solutions to the problem. But one point of importance should always be considered; that is, each involved person in decision making should judge realistically and open-mindedly upon the problem and its solution and he should avoid any other factor which causes personal pessimism in the process of realistic decision making. A detailed discussion of the effective group process is too broad a topic to be considered in this paper. However, an outline of a five-step procedure for use of group discussion in the process of decision making as reported by Maier and Hayes (29) may be of assistance in forming the important relationship of group discussion to decision making. The steps are as follow:

1. First, one must choose the problem or objectives to be accomplished. In this step two types of problems are often found, one of which is technical and/or economic and the other of which is social and/or personal, the latter of which deals with

- communication difficulties, organizational problems, intricacies of supervision and administration, intrafriction, etc.
2. Secondly, there is the principle that in formulating problems for group discussion two important rules should be considered:
 - a. The leader should avoid the statements that imply criticism and threat, this because people cannot solve the problem if they are preoccupied with shielding themselves.
 - b. Also, the leader should avoid statements that imply preconceived solutions to the problem because this helps stimulate objection and resistance.
 3. As a third step, the authors point to achieving the exchange and development of ideas. A warm atmosphere of participation, discussion, and interaction should be established, because attempting problem solving under too much pressure often introduces many emotional problems so that frustration rather than motivation may occur.
 4. The fourth step the group must be led to is to attempt to select a solution. A solution should then be tested on the basis of both quality and acceptance. Elbing (11) has the same viewpoint and says that every proposed solution must be assessed from two standpoints--the first quality if the solution is implemented actually solves the problem and meets the organizational goals; the second quality is its acceptability to those who must live with it and implement it, and hence its potential capacity to be implemented in the social system.
 5. The final step is involvement of the group in continuing concern or follow up. Problem solving in an organization never stops;

so the plan of action which needs modification should be taken to the group, in a sense, as a new problem, not merely as criticism of the previously tried and inadequate solution, now being reviewed in the light of added experiences.

Elbing (11) suggested eight criteria for problem statement. One who presents the problem may take into account the statement of the problem according to the following criteria, which are stated on page 236:

1. The problem should be stated explicitly.
2. The problem statement should include a working diagnosis.
3. The stated statement should specify the standard violated.
4. The problem should be stated in specific behavior.
5. The problem statement should not be expressed merely as an implied solution.
6. The problem statement should specify whom the problem affects (that is, who is suffering discomfort and who is responsible for a solution).
7. The problem statement should differentiate the short run and the long run in problem situation.
8. The problem should be stated as a problem, not as a dilemma.

The selection of the solution or choice of the solution is another important item given much consideration in decision-making literature. Most of the literature pertaining to this concept would seem to agree that "the choice of the solution is a key step of the decision process but experience shows that both managers and students are likely to have a tendency to 'overemphasize' this step in the total process" (11, p. 271).

Problem solving as selection of an effective alternative has a significant effect on the complete pattern of objectives which are to be

performed in the future. Due to this fact, managers and all others involved in decision making must pay attention to this crucial step. The obvious reason for this is that selection of a good alternative to solve the problem easily will generally save money, time, and effort for those who practice it. In addition to this, it is very obvious that an effective alternative is the key for further success and progress in any kind of program or operation. A person will be motivated if he fully realizes that there exists potential for a satisfactory and desirable result from his performance. A good and acceptable alternative will pave the road for a better performance. However, Elbing (11) puts great emphasis on problem diagnosis and strongly asserts that if the diagnosis has been accurate and thorough and the problem has been accurately and clearly defined, then quite likely alternative solutions will be unmistakably recognized and, therefore, the choice of a course of action will be easy for the individuals involved. Included in this position is the assertion that the lack of clarity is largely due to the errors in diagnosis and definition of the problem rather than other causes. Elbing further concludes that, without question, decision making should always be based on explicit, conscious, systematic diagnostic investigation.

From the above discussion one can say that both diagnosis of the problem and selection of alternatives are closely related to each other. As two important steps of decision making, one should pay more attention to diagnose the problem as accurately as possible based on the past, present, and future situation and then select a better alternative for an effective and successful achievement and performance and thus reach easily the ultimate goal in the shortest period of time with satisfactory

results. The diagnostic step of the decision making process, according to Elbing (11), should be correspondent with the following criteria, here presented as a summary of this position:

1. It should differentiate between the actual events in the problem situation and the language used to describe these events.
2. It should specify the degree of precision of the available information by differentiating between facts and opinions, and by clearly labeling bits of information as facts, inferences, speculations, or assumptions.
3. It should specify and explain the factors which have caused the given situation, rather than merely fixing blame.
4. It should examine the multiple causes and their relationships rather than claim a single cause.
5. It should result in a clear and explicit statement of final working diagnosis.

Selection of alternatives can well be based on the following emphases. First, experience is the best guide for selecting an alternative. One of the basic advantages of experience is the opportunity for consideration of mistakes which may have been made in the past. The more the experiences are shared in a logical and rational manner, the more possibility that this will result in selection of better alternatives. A second emphasis which is very important in the process of selection of alternatives is experimentation and research. This often provides a very accurate base for selection of alternatives, but it is both time and money consuming. While this technique can be expected to give good results in terms of long-run planning, the need for such a

technique should be carefully considered to make sure that it works as well for short-run objectives before the alternatives are exercised. Thompson and Tuden (50) believe that in the case of availability of many alternatives, it is incumbent upon the administration to provide machinery for elimination of all but a few by the voting procedure.

Similarly, Elbing (11) developed certain criteria which he presents for assessment of solution selection. The following are the summarized form of his criteria which seem beneficial for a manager to consider in the selection of a solution (p. 272):

1. The solution should be of a quality satisfactory to meet organizational goals.
2. A selection must be acceptable to those affected by it and to those who must implement it.
3. A solution should be evaluated in terms of anticipated response to it.
4. The choice of a solution should focus on present alternatives, not past possibilities.
5. The risks of each alternative solution should be considered.
6. Multiple solutions should be arranged in proper sequence.

Odiorne (40) stated on page 58 the following as possible actions to be taken to uncover the basic causes and then find a better alternative to the identified problem:

1. Make a hard specification of the problem.
2. State the problem in terms of end results, intervening variables and root causes.
3. Separate the fixed from the conditional causes.
4. Separate the vital few from the trivial many causes.
5. Follow the three stages of innovation in developing new idea.
6. If germane, use problem solving conference.

Decision Making Is "Change" Oriented

One of the other important aims of decision making is to bring a positive change in the previous system of operation by selection of better and new alternatives which fit the situation in better form. Substitution of the old form of a system by a new one requires more care and attention to introduce highly acceptable changes at the first step. There is no such intention to give some explanation as to how changes are brought about in a system or organization. However, we would like to consider some criteria developed by Alexis and Wilson (1) to determine which changes should be introduced in solving a social problem. The criteria basically deal with problem possibilities of change and growth. The principles are as follow:

1. "The easiest possible relevant change should be selected" (1, p. 189). Because the easier a series of change is, the greater its likelihood of being successful, and success is essential to a solution.
2. "Select a problem area that is independent enough from its context to sustain a separate solution" (1, p. 191). By outside pressure it is meant pressure from other parts of one's personality, other values than role expectations, etc. not included in the social area.
3. "One should begin a solution in such a way that expansion of the solution is possible" (1, p. 193). This principle, they believe, supplements the other principles.

Difficulties in Decision Making

It was mentioned earlier that decision making should be based on rationality rather than emotion. It means that adequate realistic information and facts should be made available before anything is

decided. This helps enlighten all the dark and vague parts of the subject which usually cause failure.

Richmond (46) believes wrong decisions and difficulty in making decisions could be attributable to either (1) inadequate information, often incorrect or incomplete information about the various possible alternative courses of action about this implications with respect to the ultimate outcome, or (2) inadequate specified objectives, failure to specify which outcomes are more desirable than others.

Several authors present what may be called dangerous practices in making a decision. Briefly, these can be collated as follows: (1) jumping to conclusions, (2) getting just one side of a situation, (3) putting off a needed decision, (4) failing to give reasons for decision, (5) overlooking possible consequences, and (6) changing decisions unnecessarily.

To this point quite an abundant amount of information related to decisions and the decision making process have been reviewed. This information contributes what might be referred to as "key words" to a successful and effective decision for achieving better results and reaching goals and objectives. By following these concepts, steps, and stages presented and discussed so far, each decision maker should be led to perform in such a manner as to enhance organizational operation and lead a desirable, satisfactory, and promising outcome. The effectiveness of decision, as Maier and Hayes (29) report, is the product of quality and acceptance, and they insist it is simply but truthfully:

$$\text{Effectiveness} = \text{Quality} \times \text{Acceptance}$$

They further point out that this simple expression indicates that if the

value of one of the criteria (quality or acceptance) falls to zero, the value of effectiveness will become zero.

Planning

The concept of planning is defined by various organizations and institutions differently. Each plan is based on certain assumptions that reflect the basic strategies and policies of the organization according to the nature and type of organization, but in any case the process of planning has traditionally been recognized as one of the key elements of the managerial process in any type of organization.

Planning is the most basic function of management and deals with the selection from among alternatives of future courses of action. But the future is not clear to simply pick up some of the alternatives and proceed with them. A careful analysis of the situation based on the facts that are likely to help us go in the correct direction is needed. Ward (55) pointed out that the future is inevitably abstract; that is, he maintains that we cannot see it, measure it, or taste it; we can only think about it. Therefore, we tend to simplify its structure and its content in our minds. In this context he defines planning as the purposeful programming of action, with reference to available resources and the predictive context, which means an indicated or anticipated future subject to continuous reformulation in which the proposed action is likely to be taken.

Since the future is not known, only in a very few cases can we be very exact in predictions. Nevertheless, this is the planning which bridges the gap from where we are to where we want to go, whereas otherwise the events would be left to chance. Planning, therefore, is

the intellectual process, the conscious determinant of courses of action, the basing of decisions on purpose, facts, and considered estimates. This is the conclusion of Koontz and O'Donnel (22).

Definitions of Planning

Even the simple concept of planning is defined by different people in several ways. Some of these are presented as follows.

Ewing (13) believes that planning ". . . is a method of guiding managers so that their discussions and actions affect the future of the organization in a consistent and rational manner, and in a way desired by top management" (pp. 17-18).

Egerton and Brown simply refer to planning as the systematic method for continuous maintenance of the effective and vital interests of the organization (10). They point out on page 2 that one conference board defined planning as ". . . the setting of objectives and goals and the formulation and selection of alternatives, strategies, and courses of action to reach the goals and objectives."

Smiddy (48) is essentially in agreement in asserting that the major planning functions of a manager in any organization is to set objectives and to outline policies, plans, programs, and timetables and performance standards in such a manner as to get them accomplished in as effective a way as possible.

Planning, whatever definition may be attempted, can truthfully be interpreted as the systematic effort toward rational formulation and scheduling of objectives and goals and selection of better methods and alternatives to achieve the goals in the future, but always according to the wishes of the organization.

Sometimes plans and policies are confused, and many consider them the same. To differentiate between these two, we may go with Starr (49) on the differentiation of the matter. Starr says on page 305, "Policies are sensed by members of the system to be directives sent down as rules to be followed and plans are transformed into policies." He believes policies definitely follow plans and contends that once plans are accepted, policies are automatically followed for achieving the goals planned. This refutes the statement some would make to the effect that programs are planned according to the policy of the organization. Plans, therefore, can be recognized as having the function of initiating the policy for achieving the ultimate goal. If the ultimate goal is replanned and changed, policies for new goals are also automatically changed.

Le Breton and Henning (23) stated on page 18:

. . . Significant fact is that as a plan is prepared it will often require the creation of new policies or the re-definition of existing policies. For example, the policy of the company might be to hire college trained sale engineers. If the plan should call for an increase of 10 percent in the sales forces and past experience has indicated that market conditions are such that it would be unlikely that the company could obtain the quality of people needed at the existing salary range consideration may be given to changing the selection or compensation policies. . . . It should be noted that the real test of a sound realistic policy comes when specific plans are prepared and implemented.

Plans and decisions should not be considered the same. As a matter of fact, they are different bodies of thought. According to Le Breton and Henning (23) on page 5, "Any plan must have the three characteristics or elements: Futurity, action, and personal or organizational identification or causation." Decision is different, as the same authors state on page 7 the following:

Decision is the resolution of conflicting alternative choices and is not needed to involve either action or the future. However, decision is interrelated to planning and could be used at every step in the planning process, and is possible to use a plan to arrive at a decision.

Steps in Planning

A good plan is the outcome of comprehensive thought and wise analysis of the situation before planning. Ansoff (57) recommends two steps which are required in the plan making process:

1. To solve the planning problems, which needs analysis of problem and formulation, to determine available resources and delineate, compare and choose alternative courses of action.
2. To prepare a plan based on the solution (p. 11).

The latter step involves translation of selected strategy into a time phased action and consequences and scheduling them in a manner to be compatible with materials and organizational resources of the business. Le Breton and Henning (23) reported that planning is not an automatic process. It does not just happen. They suggested some sequences in the planning process which give good sense to a planner.

The sequences are listed as follow and appeared on page 14:

1. Becoming aware of a possible need for formulating a plan.
2. Formulating a precise statement of the objectives of the plan to be prepared.
3. Preparing a broad outline of proposal.
4. Obtaining approval of the proposal.
5. Organizing planning staff and assigning responsibility.
6. Determining the specific outline of the plan.
8. Obtaining necessary data.
9. Evaluating data.

10. Formulating tentative conclusions and preparing tentative plans.
11. Testing components of tentative plans.
12. Preparing the final plan.
13. Testing the plan.
14. Obtaining approval of the plan.

Planning and plan making, to articulate the effort of the personnel toward achievement, is required more in today's organization than at any time in the past. This is due to the fact that vast social, economical, and technological changes take place from time to time in the society and in the organizations. This situation stimulates a strong desire to keep organizational operation and performance correspondent with these changes. Efforts should be focussed to direct the operation toward the achievement of the ultimate goal and to meet the needs of the society and the organization.

Briefly, some advantages of planning which are reported by Erving (57) on page 14 are listed as follow:

1. It would lead to a better position or standing for the organization.
2. It would help the organization progress in the ways that its management considers most suitable.
3. It would help every manager think, decide, and act more effectively for progress in the desired direction.
4. It would help keep the organization flexible.
5. It would stimulate a cooperative, integrated, enthusiastic approach to organizational problems.
6. It would indicate to management how to evaluate and check up on progress toward the planned objectives.
7. It would lead to socially and economically useful results.

The question of good and poor planning is also an important item in the managerial area. A poor plan not only cannot achieve the objectives of the organization but also causes much confusion, which, of course, would be considered one of failure in the form of disrupting healthy organizational operation. This is what most of the literature emphasizes--a rational and conscious planning procedure based on all available facts and realistic analysis of conditions existing within the organization. In other words, the planner should pay enough attention to consider all the factors and elements which have an influential effect on the scope and nature of the plan and also upon the atmosphere maintained by the organizational personnel engaged in planning. It is also necessary for a good plan to be flexible enough to correct shortcomings of the plan at any stage and with possibilities for minor modifications. Derbyshire (5) reported on page 17:

It is essential to maintain flexibility in any planning statement at any stage in the process, because one has to keep looking at the effects of implementation analyzing their implication and then going back to amend the objectives of the plan. This continuous recycling process if it is to be done properly implies that never at any given moment in time should more planning be done than is essential in order to achieve the immediate physical objectives.

Therefore, mistakes should be corrected before they are practiced and bring some unwanted side effects.

It was mentioned earlier that the concept of a plan is considered as a predetermined course of action. In this case, it is necessary to understand the dimensions reported by Le Breton and Henning (23), included in Appendix A, which give a view of both the dimension and the relationship of each dimension to various parts of the planning procedure as well as their combined influence on the planning process.

Program Development in Extension

The Agricultural Extension program is people-oriented and strongly deals with the improvement of the living standard of the people. This means that the Agricultural Extension program is designed to bring about a desired change in both social and economic status of farm and rural families. In social change we may include four types of changes; namely, change of knowledge, change of attitudes, change of skills and motivation, and economic change, which means a desirable rise in the per capita income of each individual, especially of farm families. The above assertion is summarized well in a UN/FAO Economic Commission report (52).

Such changes cannot be introduced or imposed on the people unless they understand the concept of these changes and believe that these changes will bring improvement in their present situation of life. Agricultural Extension programs, therefore, demand consideration of the behavioral aspects of individuals, both before and during the process of making rules and regulations toward the achievement of goals and objectives.

Extension in general is considered as the process by which desirable changes are produced in the way in which people (the target group) behave. To change the behavior of people is not an easy task. A strong effort is required to be wholly devoted to the educational phase of the program and to drive toward the kind of considerable action which enables each individual to develop his knowledge and to lead him to a better life by his own effort. Because education is the process, according to Evans (12) the true educator's attempts are focussed to:

. . . Improve the student by increasing (a) his awareness, (b) his range and level of knowledge, (c) his depth and comprehensiveness of understanding, (d) his objectivity of reasoning, (e) his intellectual or physical skills, and (f) his attitudes about those things which affect his well being (p. 4).

On the other hand, Agricultural Extension seeks all opportunities to wisely utilize natural resources with full participation by the people using their own knowledge, effort, and energy for the welfare of themselves and of the society as a whole. This fact is confirmed by a report of the Program Development Ad Hoc Committee of the Cooperative Extension Service of the United States (43) which stated on page 8:

The service conducts educational programs which result in the development of skills, attitudes and understanding of people which will enable them to conserve and effectively use natural resources; efficiently produce range, farm and forest products; increase effectiveness of marketing distribution system; optimize their development as individuals and as members of the family and community; improve their community organization services and environment; develop as informed leaders in a democratic society; and raise their level of living through wise resource management to achieve family goals.

From the above discussion it is obvious that in any type of extension program emphasis and priority is given to the clientele education. The educational part of the program is based on the various needs and interests of the group involved, especially those needs which are felt by the people. The basic concept of the program is based on the principle "helping people help themselves," which implies that the extension program is not a formal education type to be conducted in a specific period of time under specific circumstances. Conversely, it is an informal educational program which aims at teaching rural people how to improve their level of living by their own efforts through wise utilization of resources at their disposal, including better systems of farming and homemaking for the benefit of the individual, and family,

the nation, and the world. This goal is achieved by giving guidance, consultation, and advice for the people to learn from each other as well as from themselves, which is called "learning by doing."

The Program Development Ad Hoc Committee (43) strongly suggests that an effective extension type program should be based on:

1. Expressed needs of people.
2. Analysis of environment and other conditions.
3. Emerging research results.
4. Administrative response to recommendation and pressure of cooperative extension support group (p. 14).

To know the concept of extension program development, we may refer to the following statements in a mimeograph developed by Dr. Netherton (37, p. 1).

Program development consists of a set of planned, purposeful coordinated activities involving extension staff at various levels and their clientele in determining needs and designing and carrying out learning experiences. The purpose is to bring about desired change in attitudes, knowledge or skills of individuals, groups, organizations, and communities. Evaluation and feedback to assure program viability and organization renewal are an essential part of effective program development.

Raudabaugh (57) commented on page 4 the following, in which he follows the same concept:

Extension program planning has become the process by which a council or committee of local people, extension staff members and other resource persons determine their educational program. It is a process of identifying and making decisions about the people's concerns and important needs or problems in a county.

Development and projection of a program requires some characteristics and criteria. These criteria are used as guidelines for the development of any type of program to avoid confusion and guarantee the effectiveness of the program to a point. No one can suggest a few

criteria to be the unique method used in a better program development. However, some of the criteria are based on long-time experiences. Here we tend to get the benefit from these experiences and use some of them in the development of a good program.

Beal (2) agrees with the characteristics which are given by the Federal Extension Service of the United States for a program projection, as stated on pages 25-26:

1. It encompasses consideration of the major problems, needs, and potentials as viewed by a widely-representative group of the people whom extension serves.
2. It is based on the belief that people armed with the pertinent facts systematically analyzed and well understood are capable of making the most intelligent decision regarding programs to meet their needs and to solve their problems.
3. It recognizes that participation in thorough problem analysis provides much of the motivating force necessary to carry out recommended programs.
4. It is a continuous educational process, focussing attention upon a significant period of years ahead in addition to yearly or short range problems, re-appraisal, or condition change.
5. It involves a thorough study and understanding of many facts about friends and potentials pointing up opportunities that are the basis for program decision by the people.
6. It provides an opportunity for the people to discover other agencies and organizations, public or private, whose services can help to solve their problems.
7. It provides the extension service with a more definite and scientific basis for determining program adjustments and resources needed to carry out program recommendations.
8. It provides a basis for determining priorities where resources are not adequate to deal with all of the recognized problems and sets objectives against which progress and change can be measured.

The characteristics listed above will serve to answer the question as to why and how well planned programs develop and are projected into

the future.

How to Develop a Program

This is the question most program planners are concerned with. To provide a relatively better outline in this matter, it seems essential to refer to those references which are directly involved in extension type program development.

Since the development of a good program has an influential impact on the progress and the directing of the operation toward success, a planner may have a strong desire toward the development of a sound program. Knowles (21) has developed some guidelines which provide a sound basis for planning in the development of an adult education extension-type program. He asks for the involvement of all staff members who may serve in the different levels as well as local constituents and any other relevant group or organization which might be concerned. These guidelines include the following items, as found on pages 251-252:

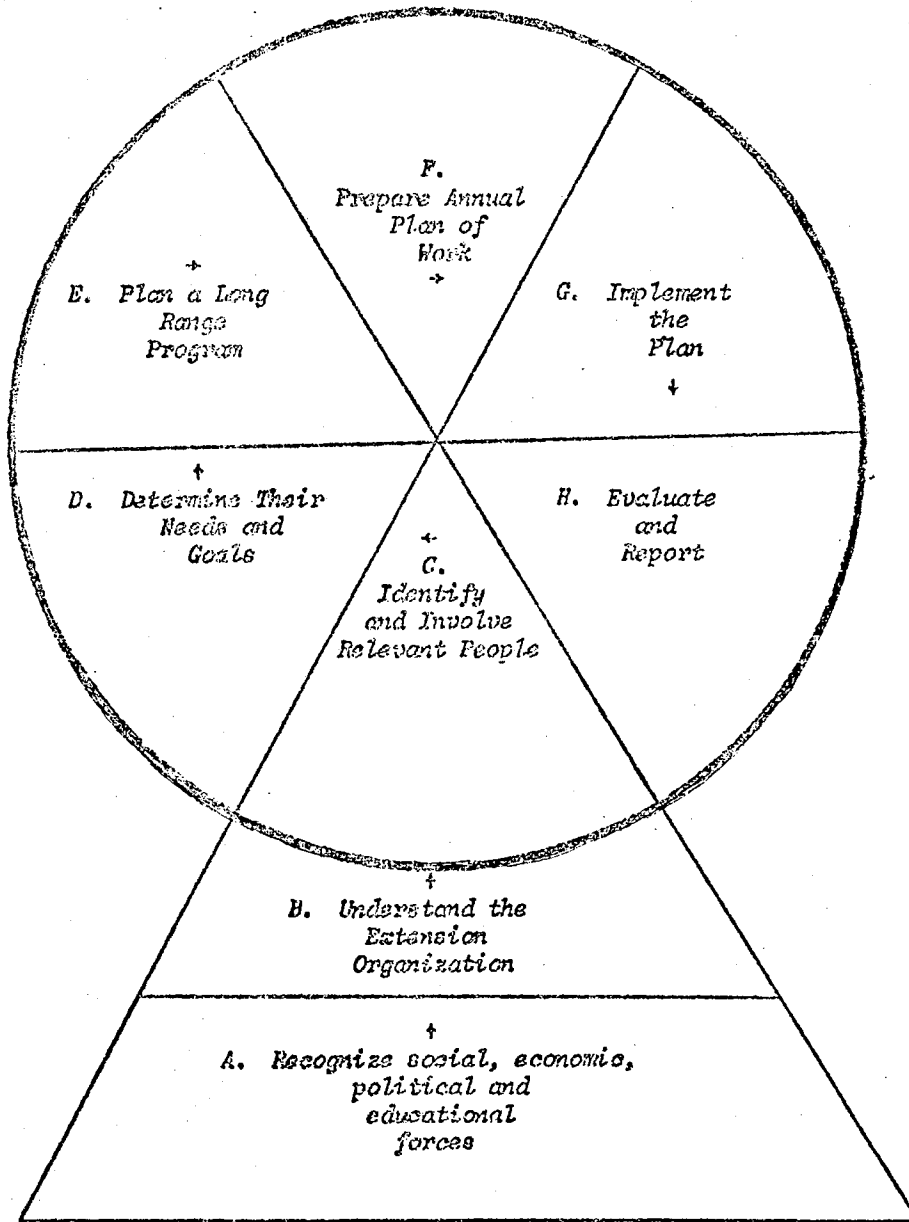
1. Appropriate organizational plan and procedure for program planning.
2. Collection of data useful in the identification of concerns and problems.
3. Analysis and interpretation of situational facts and background information.
4. Determination of priority of problems, needs, and interests.
5. Determination of general educational objectives (or goals).
6. Coordination with programs of other groups, organizations, and agencies.
7. Records and evaluation of planning activities.

Netherton's (37) model for program development emphasizes the recognition of social, economic, political, and educational forces.

These forces have a real influence on program development everywhere. The model (37) on page 61 has a clear self-explanatory nature. The steps and the direction of the process are indicated by arrows. The first step in the model is the recognition of social economic, political, and educational forces, and the last step is evaluation and reporting.

Similarly, Houle (17) reported some basic steps to be considered in program development. These steps were listed in two phases on page 3:

1. The 'initial phase' which covers the following steps:
 - a. Make a honest appraisal of the current situation.
 - b. Make an initial judgment about appropriateness.
 - c. Develop a statement of broad objectives.
 - d. Determine specific objectives for a specific period of time.
 - e. Design or adjust programs and services in such a way as to accomplish these objectives. Some of the problem areas which must often be dealt with in this connection are these:
 - (1) The clear relationship of people to one another into an effective organization.
 - (2) The development of effective program ideas.
 - (3) The selection and training of leaders.
 - (4) The proper use of methods.
 - (5) The location of effective use of suitable materials of instruction.
 - (6) The development of plans for guiding and counseling individuals who help.
 - (7) The building of group morale.
 - (8) The interpretation of the program to the public influenced by it.
 - (9) The financing of the program.
 - (10) The valuation of the program.
 - f. Carry out the program.
 - g. At the close of the specific period of time, appraise the accomplishment of the specific objectives.
2. The recurrent phases which are:
 - a. Re-examine the appraisal to determine how the current general situation has been changed.
 - b. Re-examine and revise the statement of broad objectives in the light of present knowledge.
 - c. Select a new set of specific objectives for a specific period of time.
 - d. Adjust programs and services in such a way as to accomplish these new objectives.
 - e. At the close of the specific period of time, appraise the accomplishment of specific objectives.



Source: 37, p. 4.

Figure 5. Program Development Process Elements

One of the basic elements of a good extension program is its motivational nature. Due to this fact, the program should be developed in such a way to meet all levels of the needs which are felt by the people and the society. Consideration of needs and interests of the people causes a strong motivation of the people to participate and help increase the performance of the program to a higher level. Identification of these needs and interests requires a comprehensive survey of the situation and identification of those obstacles which slow down the process of reaching to meet these needs. The more the program is oriented toward the needs of the people and the more these are met, the more the people are motivated and interested in the program.

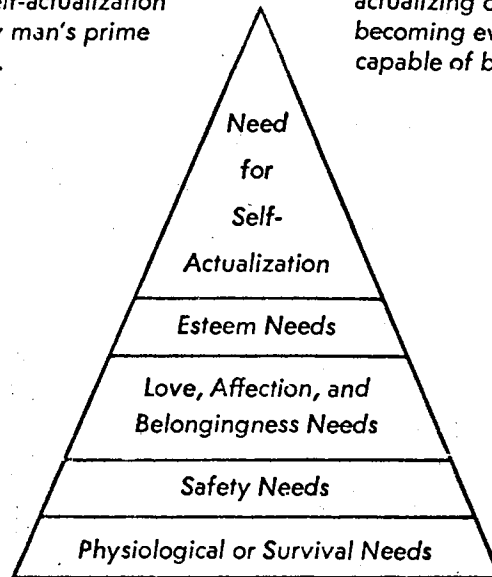
Basically, the purpose of the extension program is to satisfy three distinct sets of needs: the needs and goals of the individual, the needs and goals of institutions, and the needs and goals of society (21). As a matter of fact, institutional and societal needs are directly and indirectly originated from the evolutionary changes which occur from time to time in society, and thus the nature of needs of each individual is changed in one way or the other.

There is a very clear interpretation and categorization of individual needs. In the textbook The Modern Practice of Adult Education Knowles (21) presents the model developed by Maslow depicting a hierarchy of individual needs, which are classified into five categories. A copy of Maslow's hierarchy of human needs, as presented on page 63 as Figure 6, gives a good and clear view for any planner to recognize individual needs and consider them in the program he may be planning.

Maslow (21) also proposes the following principles of operation for these needs: (1) gratification for the needs on each level, starting

Maslow emphasizes that the need for self-actualization is a healthy man's prime motivation.

Self-actualization means actualizing one's potential, becoming everything one is capable of becoming.



Most basic needs have to do with survival physically and psychologically.

On the whole an individual cannot satisfy any level unless needs below are satisfied.

Source 21, p. 24

Figure 6. Maslow's Hierarchy of Human Needs

with the lowest, frees a person for higher level of gratification; (2) these persons in whom a need has been satisfied are best equipped to deal with deprivation of that need in the future; (3) the healthy person is one whose basic needs have been met so that he is principally motivated by his needs to actualize his higher potentialities.

Summary

A variety and good deal of information has been included in this chapter. The combination of the explanation, models, steps, criteria, key words, etc. in this chapter will help every concerned individual to develop his understanding and increase his knowledge in each related subject. The writer hopes that his efforts in the collection of these materials and information from various sources will be helpful to those who seek and need such information. The information is the basis for the model presented in Chapter III and Chapter IV.

CHAPTER III

PROCESS OF MANAGEMENT BY OBJECTIVES

The system of MBO is of great assistance to an administrator in planning, organizing, and delegating the work and operation. The concept, definition, problems associated with MBO, and implementation of this system were discussed in detail previously (see Chapter II). In this chapter a model has been developed to introduce a MBO system into an organization. The model will provide some essential steps to be considered in practicing this system.

How to Start With MBO System

Establishment and implementation of a new system, to be effective, requires a few careful steps. If these steps are well designed and understood and followed carefully, the system will lead toward progress and success. The steps may also serve as a useful outline indicating how to proceed with, and thus avoid mistakes in, the implementation of a new system. This is especially required in a MBO system where mutual negotiation and agreement on two to three levels of management are involved.

The model on page 66 includes some basic steps which seem very necessary to be considered by those who wish to practice a MBO system. The steps are as follow:

1. Understand the concept of MBO thoroughly.

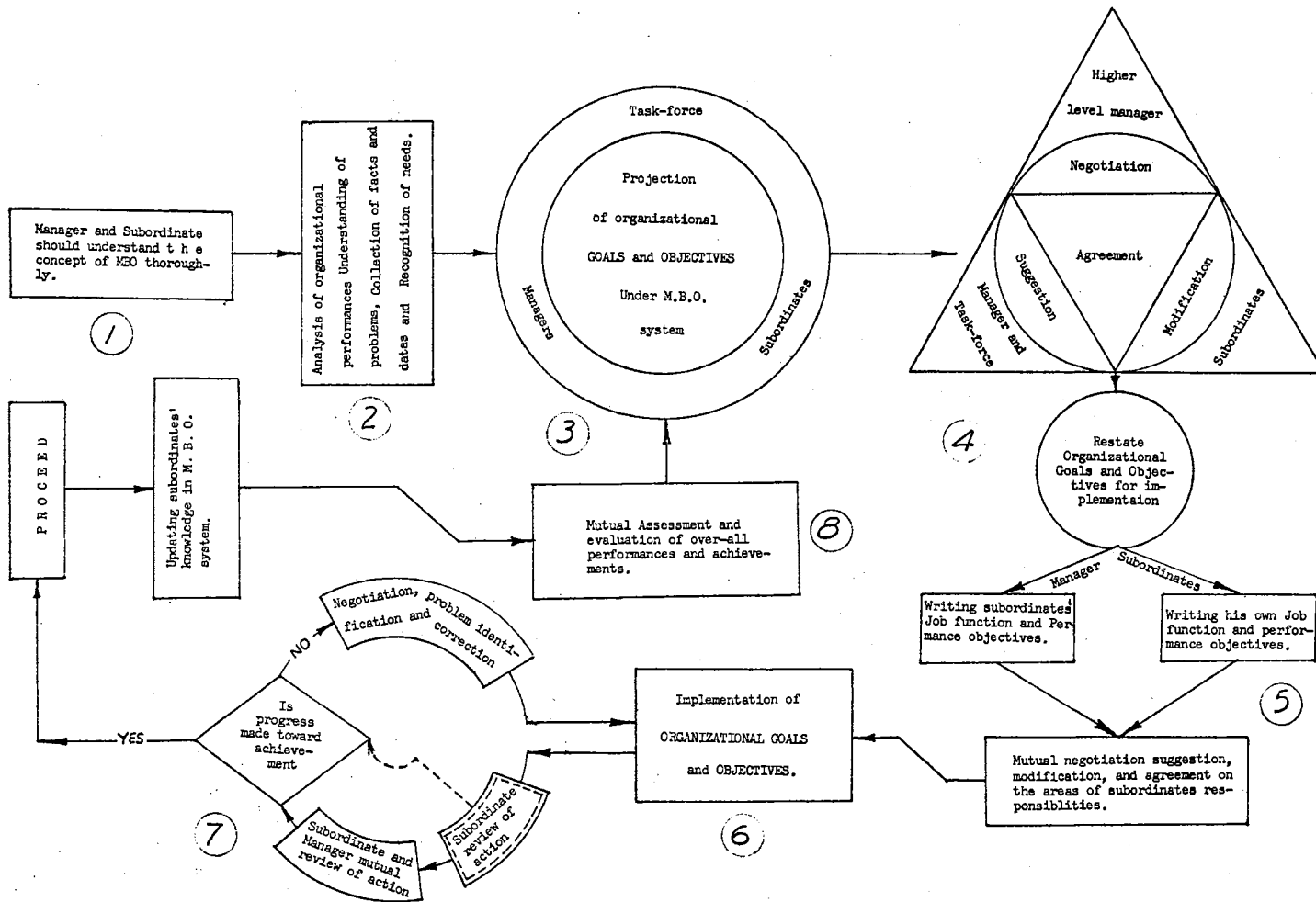


Figure 7. Basic Steps for Implementing a MBO System

2. Analysis of organizational performance, understanding the problems, and recognition of needs.
3. Projection of organizational goals and objectives.
4. Conducting a meeting with higher level management for negotiation and agreement of organizational goals and objectives.
5. Mutual determination of subordinate job function and performance objectives.
6. Implementation of organizational goals and objectives.
7. Continuous mutual review of action.
8. Mutual assessment and evaluation of overall objectives.

Some of the other steps which are shown in the model are incorporated in one or another of the main steps.

Adequate information is available in Chapter II to elaborate and enlighten the content of some of the stages mentioned above. There is no need to rediscuss them in this chapter. However, the following paragraphs focus on explanation of steps 3, 4, 5, 7, and 8.

Projection of Organizational Goals and Objectives

MBO is goal-oriented, and this step is the most important step in the system. Goals and objectives are stated by manager and subordinate. But the presence of a task force which has adequate knowledge about the whole organization is especially important when the new system (MBO) is implemented. In this case the task force may directly be involved in setting fundamental goals and objectives of the organization.

Goals are defined; broad statements of intent and the basic purpose of organization effort, they are not quantifiable and have long term

validity and meaning, define the condition to be achieved year after year if the organization is to be successful, and give the organization a direction and give the management a future (25 and 42). Organizational goals should be based realistically on the "background information" obtained in step 2 (analysis of organizational performance, understanding the problems, and recognition of needs). Organizational goals and objectives should not overestimate or underestimate; both cases are not desirable and decline the level of performance because, in the first case, availability of financial, technical, and personnel resources are the determinant factors which rule the operation and performance and with less availability of these resources nothing can be done more than that which is possible and, in the second case, it is unwise not to utilize the available resources.

Objectives are the short statements of intent which are specific, quantifiable, and more concrete steps along the way to the achievement of the goals; they indicate what is to be accomplished in what specific time (25 and 42). Objectives are formulated in such a way as to achieve the goals in the least amount of time with the lowest expense. Formulation of objectives has specific importance in the MBO system. Under normal circumstances a well-formulated objective meets the following criteria (36):

1. It starts with the word "to" followed by an action verb.
2. It specifies a single key result to be accomplished.
3. It specifies a target date for its accomplishment.
4. It specifies maximum cost factors.
5. It is specific and quantitative (and hence measurable and verifiable) as possible.

6. It relates directly to the accountable manager's roles and missions and to higher level roles, missions, and objectives.
7. It is readily understandable by those who will be contributing to its attainment.
8. It is realistic and attainable, but still represents a significant challenge.
9. It provides maximum payoff on the required investment in time and resources, as compared with other objectives being considered.
10. It is consistent with the resources available or anticipated.
11. It avoids minimum dual accountability for achievement when joint effort is required.
12. It is consistent with basic company and organizational policies and practices.
13. It is willingly agreed to by both superior and subordinate, without undue pressure or coercion.
14. It is recorded in writing, with a copy kept and periodically referred to by both superior and subordinate.
15. It is communicated not only in writing, but also face-to-face discussion between the accountable manager and those subordinates who will be contributing to its attainment.

How Are Organizational Goals and Objectives

Developed?

There are several suggestions and recommendations for the development of goals and objectives. One of them is the procedure selected by Leverenze, et al., (25) in their study. The procedure is well organized

into sequences and is thought the best procedure which is required for better development of goals and objectives. The writer would also like to use these comprehensive procedures in this study. The sequences are reported in the order illustrated in Table II.

Conducting Meeting With Higher Level of
Management for Negotiation and Agreement
of Organizational Goals and Objectives

The more discussion of the goals and objectives, the more reliable they are. In this step a very important meeting is held. The meeting should consist of task force, manager, and high level managers. In addition to this, the subordinate should have opportunities to attend this meeting. The purpose of the meeting should not be limited to the approval of goals and objectives by the top administrators (higher level managers) but considerable effort should be made to discuss these goals in such a way to avoid any type of confusion. Suggestions and modification of goals and objectives should not be limited to the top management only. Subordinate managers and the task force should be allowed to make comments as well as the top administrators for the correction of weak points that may cause less achievement in the future. Each goal and related objective should be carefully reviewed, and it should be made sure that complete agreement is obtained. The meeting should be well organized, and allocation of time for each subject should also be regularly considered. After the agreement on each element is discussed, the goals and objectives are re-stated for their implementation.

TABLE II
 PROCEDURE OF SEQUENCE FOR DEVELOPING ORGANIZATIONAL
 GOALS AND OBJECTIVES

Sequence	Responsibility	Step	Activity
1.	Task force appointed by the top administration	1.	<p>The purpose of this task will be to:</p> <ul style="list-style-type: none"> A. Study where the organization has been in the past; B. Determine where the organization is at the present time; C. Decide where the organization will likely be at some future date if it continues along the trend line it has set; and then D. Determine where the organization would like to be at some future date, focusing on the key result areas which will determine the goals for the organization. <p>The key result areas become the organizational goals, or those broad statements of intent which are not quantifiable, and define conditions to be achieved year after year if the organization is to be successful.</p>
		2.	<p>The process of determining the goals from the key result areas is best achieved by the following steps:</p> <ul style="list-style-type: none"> A. Compile a list of those things the organization must do, or would like to do concerning a particular key result area. This list should encompass

TABLE II-- (CONTINUED)

Sequence	Responsibility	Step	Activity
			those accomplishments the organization would like to achieve; those concerns the organization would like to overcome; or those opportunities the organization would like to take advantage of in this area.
		B. Repeat Step A until every key result area has been studied and a list of goal statements has been compiled.	
		C. Make sure each item on every list is a broad statement of intent which is not quantifiable.	
		D. Rank or arrange the goal statements in order of their priority.	
		3. Once the goals have been established, the task force then determines what the organization must do in order to achieve these goals. This becomes the second crucial step of developing the organizational objectives or those short statements of intent which are quantifiable.	
		4. The process of determining the organizational objectives is best achieved by the following steps:	
		A. Consider each organizational goal individually.	
		B. Specifically state what is to be accomplished and by when for each goal statement.	

TABLE II-- (CONTINUED)

Sequence	Responsibility	Step	Activity
			C. List results to be accomplished or major activities leading to the results.
			D. State the expected results or major activities in measurable terms.
			E. Be realistic in terms of available resources.
			F. Be realistic but provide challenge and growth.
			G. Identify "must" and "want" objectives and weight them accordingly.
			H. Include qualitative as well as quantitative results.
			I. Put the objective into a time frame. (Organizational objectives are usually put within a fiscal time frame.)
		5.	Present the task force recommendations for organizational goals and objectives to the top administration for modification and approval.
2.	Top Administration	6.	Reviews the task force's recommendations, and modifies the organizational goals and objectives as appropriate.
		7.	Conducts a meeting with the first level managers.
			A. Distributes a copy of the organizational goals and objectives to each first level manager.

TABLE II-- (CONTINUED)

Sequence	Responsibility	Step	Activity
3.	First Level Managers	8.	<p data-bbox="825 404 1300 752">B. Reviews the organizational goals and objectives with the first level managers and suggests some tentative goals and objectives that the first level managers should consider, when they write their organizational goals and objectives for their areas of responsibility.</p> <p data-bbox="825 793 1300 1044">C. Requests the first level managers to develop, for their areas of responsibility, the organizational goals and objectives that will enable the total organization to achieve its goals and objectives.</p> <p data-bbox="825 1079 1300 1396">Develops the first level management organizational goals that he feels must be achieved in his area of responsibility, in order to meet the total organization's goals and objectives for the set time period. This can best be achieved by the following steps:</p> <p data-bbox="825 1436 1300 1528">A. Study where the manager's area of responsibility has been in the past;</p> <p data-bbox="825 1569 1300 1682">B. Determine where the manager's area of responsibility is at the present time;</p> <p data-bbox="825 1723 1300 1880">C. Decide where the manager's area of responsibility will be at some future date if it continues along the trend line it has set;</p>

TABLE II--(CONTINUED)

Sequence	Responsibility	Step	Activity
			<p>D. Determine where the manager's area of responsibility would like to be at some future date, focusing on the key result areas which will determine the goals for the manager's area of responsibility.</p>
			<p>The key result areas become the organizational goals, or those broad statements of intent which are not quantifiable, and and define conditions to be achieved year after year if the manager's area of responsibility is to be successful.</p>
		9.	<p>The process of determining the goals from the key result area is best achieved by the following steps:</p>
			<p>A. Compile a list of those things the manager's area of responsibility must do or would like to do concerning a particular key result area. This list should encompass those accomplishments the organization would like to achieve; those concerns the organization would like to overcome; or those opportunities the organization would like to take advantage of in this area.</p>
			<p>B. Repeat Step A until every key result area has been studied and a list of goal statements has been compiled.</p>

TABLE II-- (CONTINUED)

Sequence	Responsibility	Step	Activity
			C. Make sure each item on every list is a broad statement of intent which is not quantifiable.
			D. Rank or arrange the goal statements in order of their priority.
		10.	Once the goals have been established, the first level manager then determines what the manager's area of responsibility must do in order to achieve these goals. This becomes the second crucial step of developing the organizational objectives or those short statements of intent which are quantifiable.
		11.	The process of determining the organizational objectives is best achieved by the following steps:
			A. Consider each organizational goal individually.
			B. Specifically state what is to be accomplished and by when for each goal statement.
			C. List results to be accomplished or major activities leading to the results.
			D. State the expected results or major activities in measurable terms.
			E. Be realistic in terms of available resources.
			F. Be realistic but provide challenge and growth.

TABLE II--(CONTINUED)

Sequence	Responsibility	Step	Activity
			G. Identify "must" and "want" objectives and weigh them accordingly.
			H. Include qualitative as well as quantitative results.
			I. Put the objective into a time frame. (Organizational objectives are usually put within a fiscal time frame.)
		12.	Determine and list the coordination with other agencies and/or departments that will be necessary in order to carry out the objectives that relate to the goal.
		13.	Discuss the information and assistance needed with other agencies and/or departments concerned, outlining specific requirements and fully explaining the reasons for the requirements.
		14.	Meet with the top administration to present the organizational goals and objectives for negotiation and approval.
4.	Top Administration	15.	Reviews, reconciles, consolidates, and approves the organizational goals and objectives of the first level manager at the negotiation session.
5.	First Level Manager	16.	Conducts a meeting with the second level managers in his or her area of responsibility.

TABLE II-- (CONTINUED)

Sequence	Responsibility	Step	Activity
6.	Second Level Manager	17.	<p data-bbox="943 426 1427 548">A. Distributes a copy of his or her organizational goals and objectives to each second level manager.</p> <p data-bbox="943 585 1427 963">B. Reviews the first level manager's organizational goals and objectives with the second level managers, and suggests some tentative goals and objectives that the second level managers should consider when they write their organizational goals and objectives for their area of responsibility.</p> <p data-bbox="943 1001 1427 1253">C. Requests the second level managers to develop, for their areas of responsibility, the organizational goals and objectives that will enable the first level manager to achieve his or her goals and objectives.</p> <p data-bbox="943 1289 1427 1640">Develops the second level management organizational goals that he or she feels must be achieved in his or her area of responsibility, in order to meet the first level manager's organizational goals and objectives for the set time period. This can best be achieved by the following steps:</p> <p data-bbox="943 1677 1427 1766">A. Study where the manager's area of responsibility has been in the past;</p> <p data-bbox="943 1803 1427 1921">B. Determine where the manager's area of responsibility is at the present time;</p>

TABLE II--(CONTINUED)

Sequence	Responsibility	Step	Activity
			<p>C. Decide where the manager's area of responsibility will be at some future date if it continues along the trend line it has set.</p> <p>D. Determine where the manager's area of responsibility would like to be at some future date, focusing on the key result areas which will determine the goals for the manager's area of responsibility.</p> <p>The key result areas become the organizational goals, or those broad statements of intent which are not quantifiable, and define conditions to be achieved year after year if the manager's area of responsibility is to be successful.</p>
18.			<p>The process of determining the goals from the key result area is best achieved by the following steps:</p> <p>A. Compile a list of those things the manager's area of responsibility must do, or would like to do concerning a particular key result area. This list should encompass those accomplishments the organization would like to achieve; those concerns the organization would like to overcome; or those opportunities the organization would like to take advantage of in this area.</p>

TABLE II-- (CONTINUED)

Sequence	Responsibility	Step	Activity
			<ul style="list-style-type: none"> B. Repeat Step A until every key result area has been studied and a list of goal statements has been compiled. C. Make sure each item on every list is a broad statement of intent which is not quantifiable. D. Rank or arrange the goal statements in order of their priority.
		19.	Once the goals have been established, the second level manager then determines what the manager's area of responsibility must do in order to achieve these goals. This becomes the second crucial step of developing the organizational objectives or those short statements of intent which are quantifiable.
		20.	<p>The process of determining the organizational objectives is best achieved by the following steps:</p> <ul style="list-style-type: none"> A. Consider each organizational goal individually. B. Specifically state what is to be accomplished and by when for each goal statement. C. List results to be accomplished or major activities leading to the results. D. State the expected results or major activities in measurable terms.

TABLE II-- (CONTINUED)

Sequence	Responsibility	Step	Activity
			E. Be realistic in terms of available resources.
			F. Be realistic but provide challenge and growth.
			G. Identify "must" and "want" objectives and weight them accordingly.
			H. Include qualitative as well as quantitative results.
			I. Put the objective into a time frame. (Organizational objectives are usually put within a fiscal year time frame.)
		21.	Determine and list the coordination with other agencies and/or departments that will be necessary in order to carry out the objectives that relate to the goal.
		22.	Discuss the information and assistance needed with other agencies and/or departments concerned, outlining specific requirements and fully explaining the reasons for the requirements.
		23.	Meet with the first level manager to present the organizational goals and objectives for negotiation and approval.
7.	First Level Manager	24.	Reviews, reconciles, consolidates, and approves the organizational goals and objectives of the second level manager at the negotiation session.

TABLE II-- (CONTINUED)

Sequence	Responsibility	Step	Activity
8.	Second Level Manager	25.	<p>Conducts a meeting with the third level managers in his or her area of responsibility.</p> <p>A. Distributes a copy of his or her organizational goals and objectives to each third level manager.</p> <p>B. Reviews the second level manager's organizational goals and objectives with the third level managers, and suggests some tentative goals and objectives that the third level managers should consider when they write their organizational goals and objectives for their area of responsibility.</p> <p>C. Requests the third level managers to develop, for their areas of responsibility, the organizational goals and objectives that will enable the second level manager to achieve his or her goals and objectives.</p>
9.	Continue on as before until the cycle has reached every level of management in the organization.		

NOTE: Manager's Area of Responsibility: All the individuals within the Unit, Section, Department, Division or any other subdivision in the organization that the manager is responsible for.

SOURCE NO. 25, pp. 8-16.

Determination of Subordinate Job Function
and Performance Objectives

Job function, or "key responsibility" areas, of the jobs for the subordinate are mutually determined by the manager and subordinate. After negotiation and agreement on the job function, the subordinate develops his performance objectives for each identified job function. Performance objectives are developed as "short statements of intent" which are quantifiable and scheduled for a specific period of time. In other words, performance objectives are realistically developed both by the manager and by the subordinate to indicate what is to be done and by when, stating the expected results in measurable terms and categorizing each of them according to their nature as extremely difficult, difficult, some difficulty, easy, and extremely easy. Once the subordinate develops his performance objectives and the manager develops subordinate performance objectives, both manager and subordinate negotiate and decide and mutually agree on the importance and difficulty of the objectives. The following are consequences reported by Leverenze et al., (25) (see Table III).

Job function and performance objectives are developed under the guideline of organizational goals and objectives, which give the direction for the achievement of measurable targets by the total management area. The following example, which describes and identifies job functions and performance objectives for the first quarter activities of fiscal year 1974 (correspondent to 1353 Hejri Afghan Calendar) for the General Director of Agricultural Development and Extension of a province, is developed as a sample for any other department in the Extension Service in Afghanistan. (See Table IV.)

TABLE III
 PROCEDURE OF SEQUENCE FOR DEVELOPING PERSONAL JOB
 FUNCTIONS AND PERFORMANCE OBJECTIVES

Sequence	Responsibility	Step	Activity
1.	Manager	1.	Writes the major job functions of his or her subordinate. A. Keeping in mind the major functions are those key result areas or general objectives for which the subordinate is held accountable. They are the major responsibilities of his or her position.
2.	Subordinate	2.	Writes his or her own major job functions. (NOTE: Step 1 A. above).
3.	Manager and Subordinate	3.	Meet and discuss the major job functions and mutually agree on the job content and the relative importance of each major job function.
		4.	The manager suggests tentative performance objectives for each job function of his or her subordinate.
		5.	Manager requests the subordinate to develop specific performance objectives for each job function, that the subordinate feels must be achieved in his or her area of responsibility to enable the management area to meet its organizational goals and objectives for the coming year.
4.	Subordinate	6.	For each job function, the subordinate lists the specific results he or she expects to accomplish during the time

TABLE III--(CONTINUED)

Sequence	Responsibility	Step	Activity
			<p>period covered. Performance objectives should:</p> <p>A. Specifically state what is to be accomplished and by when.</p> <p>B. List results to be accomplished or major activities leading to the results.</p> <p>C. State the expected results or major activities in measurable terms.</p> <p>D. Complement or support the manager's organizational goals and objectives.</p> <p>E. Be realistic in terms of available resources.</p> <p>F. Be realistic but provide challenge and growth.</p> <p>G. Identify "must" and "want" objectives and weigh them accordingly.</p> <p>H. Include qualitative as well as quantitative results.</p>
5.	Manager and Subordinate	7.	Meet and negotiate the subordinates' performance objectives and mutually agree upon the importance and difficulty of the objectives.
6	Subordinate	8.	Begins working on the performance objectives with the realization that he or she will be held accountable for the accomplishment of the negotiated performance objectives.

TABLE IV

PERSONAL JOB FUNCTION AND PERFORMANCE OBJECTIVE EVALUATION

Department <u>Agricultural Development and Extension</u> Unit <u>(division)</u> Person _____															
Major Job Functions	Job Objectives	Performance Review													
		Evaluation				Comments for Interview									
		Difficulty of the Objective			Achievement of the Objective										
List, in order of importance, the key responsibility areas of your job. (Those general areas within which you are held accountable for producing results.)	For each Job Function, list the specific results you expect to accomplish during the time period covered. Objectives should include what is to be accomplished, by what date, at what cost and quality, etc.	Extremely Difficult	Difficult	Some Difficulty	Easy	Extremely Easy	Exceeded	Achieved	Partially Met	Little Done	No Activity	Use this column to continually update objectives or to enter possible reasons why some objectives were exceeded and others not met when conducting the performance review.			
		Planning	1. To develop a priority list for the programs he is going to accomplish in the future for the Fiscal Year 1974 by March 10.			X									
			2. To conduct two meetings with Director of Extension and other directors of Ministry of Agriculture and Irrigation to discuss and understand budgetary and financial requirements of the department of Agricultural Development and Extension and other divisions for Fiscal Year 1974 by March 15.		X										
	3. To plan at least one tour to each unit understanding nature of the problems existing in each unit before March 20, 1974.			X											
Budgeting	1. To prepare and propose a detailed report which is based on the previous negotiation with his department staff for four quarters of the fiscal year for the province with the president of Agricultural Development and Extension in Kabul by March 20, 1974.	X													

TABLE IV-- (CONTINUED)

Major Job Functions	Job Objectives	Performance Review																		
		Evaluation					Comments for Interview													
Budgeting (continued)	2. To propose provision and purchase of stationary and other facility requirements of his department for Fiscal Year 1974 to the Department of Agricultural Development and Extension by March 20, 1974.					X														
Staffing	1. To identify, recruit, transfer, and exchange appropriate staff for 1974 within one month before March 21, 1974. (It may differ from province to province according to the climatic and other conditions.)	X																		
	2. To review the work load and progress of each unit at the end of each quarter during Fiscal Year 1974 in order to determine staff requirements and make recommendations to the director of extension, supervisors of the units, and other directors of agriculture working under his supervision about better performances.					X														
Supervision and Direction	1. To plan and conduct two educational courses and seminars for his extension workers in early March.						X													
	2. To plan and conduct weekly meetings of directors working under him for guidance and consultation, supervision, and control of their performances.									X										
	3. To review, revise, and approve the job objectives and job functions of his staff members who report directly to him for Fiscal Year 1974 by March 30, 1974.																			

TABLE IV--(CONTINUED)

Major Job Functions	Job Objectives	Performance Review								
		Evaluation							Comments for Interview	
Supervision and Direction (continued)	4. To review, evaluate, and act on monthly reports from director of extension prepared by agriculture unit supervisor after one week from time of submission to him.	X								
	5. To review and decide on allocation of improved seeds and subsidized fertilizer to be distributed to the units according to the requirement of the farmers growing crops during that season.		X							
	6. To supervise and control the distribution of seeds and fertilizer in all of his areas of operation by touring to each place.	X								
	7. To supervise and direct the program of agricultural machinery and equipment workshops within his area of operation whenever these are needed.			X						
	8. To program and conduct "field day" in a desirable location in the end of seasons.		X							
	9. To supervise training and guidance centers in his area of operation and make recommendation for bettering the program from time to time.			X						
	Administration	1. To write briefly monthly reports to one or more of the departments of the Department of Agricultural Development and Extension which have requested such information.			X					
		2. To report monthly performances to the regional supervisors.			X					

TABLE IV-- (CONTINUED)

Major Job Functions	Job Objectives	Performance Review									
		Evaluation					Comments for Interview				
Administration (continued)	3. To submit quarterly report at the end of the third month on the performances during the quarter to the main Department of Agricultural Development and Extension.				X						
	4. To evaluate performances and accomplishments of his subordinates during the first quarter of Fiscal Year 1974.	X									
Other Duties and Assigned and Miscellaneous Responsibilities	1. To establish priorities and objectives of special assignments within one day from time assigned during Fiscal Year 1974.	X									
	2. To participate in some of the meetings conducted by the governor of the province from time to time and discuss the agenda of the meeting which relates to his program.				X						
	3. To supervise and help development of farmer leadership in his area of operation.	X									
	4. To cooperatively help other extension-type agencies such as Program of Agricultural Credit and Cooperatives, Agricultural Development Bank, etc. in improvement and expedition of the nature of the performances.	X									
	5. To participate in some of the traditional ceremonies of the farmers in order to learn the situation of the rural community and develop a good confidence between him and his staff and farmers.				X						

Implementation of Organizational Goals and

Objectives

In this step both managers and subordinates are well prepared and well aware of their areas of responsibility. They have no confusing points in their minds about the implementation of goals and objectives. Yet, motivation and encouragement of the subordinate by the manager is very necessary and required.

Continuous Review of Action

One of the contributing factors of success and progress is continuous evaluation of each sequence of performance. In this step it is strongly recommended to evaluate the performances continuously, for it detects troubles before they reach the serious point. Both subordinate and manager should be well aware of what is going on, what obstacles hinder progress, how much progress he makes on a daily basis, etc. Each individual should informally and privately review his daily performances and see if he makes progress toward achievement. If he notices any weakness and less achievement due to some problems, he should ask the manager for negotiation and correction of the situation very soon. Hesitation to do so may further complicate the problem.

Similarly, mutual review of action between the manager and subordinate should take place from time to time and correct the undesirable situation anytime it happens. Remember, motivation is very important; the manager should encourage his subordinate toward good performances rather than blaming him for the mistakes he has made.

MBO training should be made available from time to time to develop the knowledge of the involved personnel. Both formal and informal

training may help improve performance. Sharing the experience of managers and subordinates from the same department and from other departments which practice MBO may also help to advance their knowledge about healthy operations. The "Director" of MBO may keep in contact with each department head (manager) to explain his experience, and he may use these experiences for providing some published materials for others.

Evaluation of Overall Achievements

This is the last step of an effective MBO system. The MBO system asks for scheduling the goals and objectives in a specific period of time. At the end of this period, the subordinate, manager, and some members of the task force will have a strong desire to evaluate the achievement. Evaluation helps to understand the causes for less achievement and thus avoid them in future programs. Although the continuous mutual review of action during the process will avoid troubles, in some cases some serious problems suddenly happen, and they are difficult to control easily. The other advantage of this type of evaluation is that it provides adequate data for the future.

Evaluation of achievement and performances is a good motivational device. Since the appraisal in the MBO system is based on results, each involved individual is very anxious to see the results of his activity. Odiorne (39) stated that the theory of appraisal is that employees can be positively motivated to considerable degree by their superior's following two basic precepts:

1. He lets his subordinates know what is expected of them; what constitutes good performance; and what constitutes unsatisfactory performance.

2. He uses these standards of good and poor performance subsequently to let the employee know how well--or poorly--he has performed over a specific period just completed.

Job performance evaluation takes place between the subordinate and the manager. This may take place on a quarterly basis, at which time the subordinate and the manager develop those scheduled performance objectives which each staff member is responsible for performing.

Leverenze, et al., (25) reported that performance evaluation ". . . is the review of the performance objectives of each staff member in terms of how well previously established performance objectives have been accomplished" (p. 45). In general the following of three steps is basically important for an effective evaluation in the MBO system:

1. Review the performance by objectives for the time concerned.
2. Measure the job performance. The achievement could be classified: (see performance evaluation on page 86)
 - a. Level I -- No activity
 - b. Level II -- Little done
 - c. Level III -- Partially met
 - d. Level IV -- Exceeded
3. Determination of the causes for not meeting the performance objectives. Causes to fail could be fully discussed and the nature of the failure should be fully understood in order to improve future performance. Failure may be due to either fault of manager, situation, or subordinate (or any combination of each of these to each other or a combination of all).

Evaluation should be based on complete impartiality. Personal

bias and prejudice should be especially avoided when sanction is offered for performances, because unrealistic reward systems cause a great deal of dissatisfaction and disappointment, which decline motivation.

CHAPTER IV

JURY ASSESSMENT OF FORMULATED GOALS AND OBJECTIVES UNDER SYSTEM OF MANAGEMENT BY OBJECTIVES

This chapter consists of goals and objectives formulated under the MBO system for the following main areas operated by the Department of Agricultural Extension Service:

1. Wheat production
2. Corn production
3. Rice production
4. Fruit and vegetable production
5. Fibers and industrial crops
6. Training technical personnel
7. Dissimination of information and research work through radio and publications
8. Educational and guidance centers
9. Plant protection and disease control
10. Mechanization of agriculture

During the past few years under the new organizational structure a greater attempt has been made to increase agricultural production by utilizing any possible resource. For example, a considerable amount of improved seeds of different crops, chemical fertilizers, farm machines and equipment, etc. have been imported from different countries and then

provided for the farmers with relatively lower cost under the government subsidy program. Similarly, new guidance and consultation centers were to be established and a number of trained personnel were to be hired to help farm families and rural people in various aspects of their lives. It is hoped that these types of changes are further extended in the new system of government and focus on the solutions to problems of the majority of Afghan people.

The main purpose for the formulation of goals and objectives are:

1. To formulate goals and objectives under the MBO system to be an example and serve as a model for program planners and whoever practices the MBO system.
2. To submit the formulated goals and objectives to those staffs which have adequate knowledge about the MBO system for their evaluation in order to provide further useful guidelines, whether they are well formulated according to the policy of the MBO system.
3. To submit them to those staff members and international students who pursue their graduate work at Oklahoma State University and who are involved in agricultural education and extension programs back in their home countries to see if such goals and objectives are applicable from their viewpoints and their situations where the extension service helps farmers in various areas of agriculture and farming. Students selected for this purpose represent the following countries:

- | | |
|----------------|-----------------|
| a. Afghanistan | f. Saudi Arabia |
| b. Korea | g. Thailand |
| c. Ethiopia | h. Tunisia |
| d. Philippines | |
| e. Somalia | |

The goals and objectives are based partially on the information obtained from the Afghanistan governmental publications and partially on the author's own frame of reference and ideas. However, they are developed just to be a "model" and guideline--how to formulate goals and objectives under the MBO system--rather than to be thought of as being only organizational goals and objectives for the Extension Service of Afghanistan. Therefore, these goals and objectives are subjected to any type of change and modification, according to the nature of the organization and program.

The jury members were categorized into two groups. The first group consisted of 18 prospective professors whose major areas of profession were associated with agricultural education and extension, extension planning, administration and supervision, vocational and technical education, research and planning, curriculum development and programming, and consultant and coordination of international training affairs. Their names and specialty areas are listed in the appendix. The second group was composed of 12 international students from different countries of the world who were directly involved in agricultural extension programs and some in agricultural research and who were serving as administrators in one way or the other in agricultural programs back in their own countries, which have been listed previously. Most of these students were aware of the MBO system.

The jury members were asked to respond to goals and objectives in terms of (a) realistic, (b) clearly formulated, (c) applicable, (d) quantifiable, and (e) evaluation potential. Jury members were asked to respond and evaluate each item in terms as follows:

- 4 -- Very good
- 3 -- Good
- 2 -- Fair
- 1 -- Poor
- 0 -- Not acceptable (see appendix)

For evaluation of jury responses it was decided to use means of 3.5. The reason for this was that the higher the average score selected as a criterion of evaluation of goals and objectives for each item, the more accurate results will be obtained from the goals and objectives.

It was difficult for the first group to evaluate the goals and objectives for the two items, realistic and applicable, due to their unfamiliarity with the situation of Afghanistan. Yet they used their judgments to score the goals and objectives for the two items (realistic and applicable) as well as the other items according to the types of experiences they had had.

Meanwhile, the members of the second group faced with less difficulty the evaluation of the goals and objectives of the items realistic and applicable due to the relative similarity of developing countries to each other, especially in this field.

The following table (Table V) indicates the average score of the responses for each of the items evaluated by both groups.

The jury assessment of the formulated goals and objectives were projected into the future and were interpreted as follow:

1. Goals and objectives which had an average score of 3.5 - 4.0 for each evaluation criterion used in this study may be ranked acceptable according to the policy of the MBO system; therefore, there may be no need to restate them.

TABLE V
AVERAGE SCORES OF RESPONDENTS FOR THE TWO RESPONDENT GROUPS

Goals and Objectives	Professional Group					International Students Group				
	Realistic	Clearly Formulated	Applicable	Quantifiable	Evaluation Potential	Realistic	Clearly Formulated	Applicable	Quantifiable	Evaluation Potential
WHEAT PRODUCTION										
<u>Goal:</u>										
To increase and improve wheat production in the country to meet the domestic need as well as to provide some excess for export.	3.55	3.72	3.77	—	3.05	3.58	3.68	3.67	—	3.42
<u>Objectives:</u>										
1. To establish the following farms in different provinces for the purpose of improved seed production by 1975.										
--A 600 hectar farm in Chardiwari area of Ghazni Province	3.33	3.77	3.66	3.61	3.66	3.75	3.92	3.75	3.67	3.83
--A 400 hectar farm in Tarnak area of Kandahar Province	3.44	3.77	3.72	3.55	3.61	3.75	3.83	3.75	3.58	3.83
--A 100 hectar farm in Ningrahar Province	3.38	3.61	3.50	3.44	3.66	3.67	3.75	3.67	3.67	3.83
--Improve Dashti Asuqan farm of Kapisa, Parwan Province	3.22	3.00	3.22	2.44	2.83	3.67	3.58	3.58	2.58	3.75
2. To distribute totally 4,711,100 tons of urea and 97,350 tons of di ammonium phosphate to wheat growers by the end of 1976.	3.38	3.61	3.77	3.77	3.77	3.58	3.83	3.75	3.58	3.50
3. To distribute 4,000 tons of different varieties of improved seed, according to climatic condition of each locality to the farmers by 1976.	3.33	3.50	3.72	3.66	3.38	3.75	3.75	3.75	3.67	3.83
4. To plan a program of farmer guidance in production of improved seeds to involve 80% of the farmers who grow improved varieites in the program by 1974.	3.33	3.11	3.66	3.33	3.27	3.75	3.83	3.67	3.75	3.67
5. To increase the farmers' knowledge on improved wheat cultural practices and farming methods by direct teaching, mass media, and information dissemination to enable each wheat grower to maximize his yield from 85-90% compared to the past by 1976.	3.11	3.38	3.61	2.83	2.83	3.58	3.75	3.83	3.58	3.58
6. To encourage and increase the number of farmers in production of improved seeds to meet 80% of the need of their own village and community by 1976.	3.38	3.44	3.66	3.00	3.00	3.75	3.67	3.75	3.67	3.67
7. To grow totally 1,200 tons of improved seeds in mentioned governmental farms with application of 652 tons of urea and 1,097 tons of DAP for the purpose of improved seed production by 1976.	3.38	3.66	3.55	3.55	3.61	3.67	3.75	3.75	3.75	3.83

TABLE V--(CONTINUED)

Goals and Objectives	Professional Group					International Students Group				
	Realistic	Clearly Formulated	Applicable	Quantifiable	Evaluation Potential	Realistic	Clearly Formulated	Applicable	Quantifiable	Evaluation Potential
8. To establish seed certification division within the Department of Agriculture Development and Extension to certify 80-90% of all seeds in the country by the end of 1974.	2.61	3.33	3.22	3.11	3.05	3.75	3.75	3.58	3.67	3.58
9. To re-open seed cleaning centers in Kabul, Baghlan, Kandahar, Herat, and Balkh provinces in order to clean 70-80% of the improved varieties of seed by 1975.	3.38	3.50	3.61	3.50	3.27	3.75	3.83	3.58	3.73	3.42
CORN PRODUCTION										
<u>Goal:</u>										
To increase total production of corn to make the country self-sufficient and improve the quality of corn both for food and feed purposes.	3.55	3.55	3.72	--	3.16	3.83	4.00	4.00	--	3.83
<u>Objectives:</u>										
1. To provide 1,680 tons of improved varieties of corn seed and distribute to the farmers by 1976.	3.22	3.72	3.66	3.72	3.61	3.58	3.67	3.83	3.83	3.83
2. To grow 25 tons of improved varieties on governmental farms for the purpose of improved seed production by 1976.	3.44	3.66	3.66	3.66	3.55	3.58	3.67	3.67	3.58	3.42
3. To distribute totally 11,094 tons of urea and 4,646 tons of DAP to corn growers by 1976.	3.44	3.77	3.83	3.83	3.72	3.83	3.83	3.83	3.75	3.67
4. To increase number of demonstrational plots by 50% by the end of 1975.	3.33	3.72	3.72	3.61	3.55	3.75	3.83	3.83	3.83	3.83
5. To raise level of knowledge of farmers in modern and improved methods of growing corn to maximize average yield of corn by 70-80% compared to previous years by 1976.	2.88	3.22	3.72	3.38	3.00	3.42	3.58	3.58	3.42	3.67
RICE PRODUCTION										
<u>Goal:</u>										
To increase total production of rice to make the country self-sufficient and improve the quality of rice by introduction of improved higher yield varieties.	3.66	3.72	3.66	--	3.33	3.83	3.83	3.83	--	4.00
<u>Objectives:</u>										
1. To crop 23 tons of improved varieties on governmental farms with application of 26 tons of urea and 15 tons of DAP by 1976.	3.27	3.33	3.61	3.61	3.66	3.50	3.75	3.83	3.83	3.83

TABLE V--(CONTINUED)

Goals and Objectives	Professional Group					International Students Group				
	Realistic	Clearly Formulated	Applicable	Quantifiable	Evaluation Potential	Realistic	Clearly Formulated	Applicable	Quantifiable	Evaluation Potential
2. To distribute 990 tons of improved seeds and 2,856 tons of urea and 1,821 tons of DAP to the farmers by 1976.	3.61	3.83	3.88	3.83	3.77	3.67	3.83	3.75	3.75	3.75
3. To increase the percentage of demonstrational plots by 50% by the end of 1976.	3.38	3.72	3.66	3.66	3.61	3.75	3.67	3.75	3.75	3.75
4. To lead 80% of the farmers to grow improved varieties by the end of 1976.	2.94	3.22	3.50	3.11	3.05	3.58	3.42	3.33	3.50	3.50
5. To establish a cooperative-type program for the village farmers to sell their produced rice 20-30% via cooperatives by the end of 1976.	3.55	3.61	3.94	3.66	3.66	3.58	3.67	3.50	3.58	3.58
FRUIT AND VEGETABLE PRODUCTION										
FRUITS										
<u>Goal:</u>										
To increase productivity of fruit trees and improve the quality by introduction and distribution of improved high yield varieties of fruit to the farmers and control of insects and disease throughout the country in order to increase the supply of good quality fruit to foreign and local markets.	3.72	3.61	3.77	--	3.44	3.83	3.58	3.58	--	3.58
<u>Objectives:</u>										
1. To introduce and familiarize farmers with modern cultural practices such as pollination, distance between trees, weed control, scientific pruning, fertilizer application in such a manner to increase fruit production of each locality 80% by the end of 1976.	2.83	3.55	3.66	3.16	3.22	3.58	3.58	3.58	3.50	3.50
2. To control 60-80% of the diseases and insects in both governmental and private orchards by most economic chemicals and methods by 1976.	3.05	3.11	3.44	2.88	3.00	3.58	3.58	3.50	3.75	3.67
3. To establish 84 demonstrational almond orchards in Zabul, Balkh, Semengan, and Chardighorband Parwan provinces, planting 6,320 improved trees and application of 672 tons of urea and 712 tons of DAP by the end of 1976.	3.38	3.66	3.72	3.83	3.50	3.92	3.67	3.75	3.75	3.75
4. To distribute 136,200 improved varieties of almond trees to the farmers in Balkh, Semengan, and Zabul provinces by 1976.	3.38	3.38	3.50	3.72	3.50	3.50	3.58	3.50	3.75	3.75
5. To establish 50 nurseries in required areas in order to provide 80% of improved fruit trees for the farmers by the end of 1976.	2.77	3.05	3.33	3.27	3.22	3.75	3.75	3.67	3.67	3.67

TABLE V--(CONTINUED)

Goals and Objectives	Professional Group					International Students Group				
	Realistic	Clearly Formulated	Applicable	Quantifiable	Evaluation Potential	Realistic	Clearly Formulated	Applicable	Quantifiable	Evaluation Potential
6. To distribute 11,760 tons of urea and 12,220 tons of DAP to the grape and almond growing farmers by 1976.	3.50	3.50	3.72	3.50	3.44	3.75	3.83	3.67	3.67	3.75
7. To graft totally 140,000 trees of almonds in Zabul, Balkh, Semangan, and Parwan provinces by 1976.	3.16	3.44	3.61	3.50	3.33	3.75	3.92	3.75	3.83	3.83
8. To establish at least one small cooperative type market (conducted by unit supervisor) within each fruit producing area to facilitate transportation of fruit to main market without damage by 1975.	3.72	3.66	3.83	3.72	3.66	3.75	3.75	3.67	3.50	3.92
9. To build a space for culling and storage of fruit and vegetables in the Kabul area and complete 100% of the construction by 1976.	3.50	3.66	3.55	3.55	3.55	3.67	3.50	3.75	3.92	3.83
VEGETABLES										
<u>Goal:</u>										
To grow sufficient amounts of vegetables to fulfill the need of the country by introduction of new and improved varieties of vegetables to the farmers and lead farmers to get higher yields from their vegetable crops.	3.61	3.50	3.61	--	3.11	3.75	3.75	3.83	--	3.83
<u>Objectives:</u>										
1. To introduce improved resistant to diseases and more productive varieties of vegetables to be grown in 4,309 hectares by 1976.	3.11	3.11	3.72	3.37	3.11	3.75	3.67	3.50	3.83	3.67
2. To increase 80% of the total production of vegetables by encouraging and training farmers to practice new methods of cultivation, fertilizer application, chemical application to control diseases, insects, and weeds by 1976.	2.94	3.16	3.50	3.11	3.11	3.50	3.58	3.58	3.58	3.50
3. To introduce resistant-to-cold varieties in cold areas in order to meet 10% of the need deficiency of vegetables during cold seasons by 1976.	3.16	3.33	3.50	3.11	3.22	3.67	3.67	3.50	3.83	3.67
4. To provide 5% of radiated seeds of vegetables at the beginning and grow them in at least 50 demonstrational plots for the purpose of observation and distribution of starting plants (seedlings) to the farmers by 1975.	3.33	3.05	3.66	3.55	3.55	3.83	3.58	3.58	3.58	3.67
5. To distribute 1,354 tons of improved potatoes with 16 tons of urea and 15 tons of DAP to the farmers by 1976.	3.27	3.61	3.55	3.61	3.55	3.67	3.92	3.67	3.92	3.58

TABLE V--(CONTINUED)

Goals and Objectives	Professional Group					International Students Group				
	Realistic	Clearly Formulated	Applicable	Quantifiable	Evaluation Potential	Realistic	Clearly Formulated	Applicable	Quantifiable	Evaluation Potential
FIBERS AND INDUSTRIAL CROPS										
COTTON										
<u>Goal:</u> To increase total production of cotton to allow textile and oil industries of the country to develop and extend and to export the excess fiber to foreign countries	3.55	3.55	3.72	--	3.16	3.83	3.83	3.83	--	3.58
<u>Objectives:</u>										
1. To plan 100 tons of improved varieties of cotton seed annually on 1,900 hectares in Kunduz, Balkh, Herat, and Faryob provinces to provide improved high germinating seeds to the farmers.	3.27	3.33	3.55	3.44	3.44	3.75	3.58	3.67	3.83	3.67
2. To introduce 10,828 tons of high yield and superior quality varieties of seed according to their adaptation to different climates to cotton growing farmers by 1976.	3.11	3.55	3.61	3.61	3.38	3.58	3.67	3.58	3.75	3.75
3. To distribute 22,000 tons of urea and 5.762 tons of DAP to the farmers by 1976.	3.27	3.50	3.11	3.66	3.55	3.58	3.58	3.67	3.67	3.67
4. To introduce 4,250 Ariana plows and encourage farmers in cold areas to grow 14,900 hectares of short season cotton by 1976.	3.38	3.55	3.61	3.55	3.44	3.67	3.83	3.50	3.67	3.67
5. To increase the number of pilot plots by 30% within farmers' farms compared to present time in each locality by 1975.	3.22	3.55	3.55	3.61	3.44	3.75	3.50	3.67	3.75	3.67
6. To train at least 60% of cotton growing farmers to practice modern practices, apply chemicals for insects and disease control, sorting according to the standards of textile and oil mill industries by 1976.	3.44	3.38	3.38	3.11	3.11	3.75	3.58	3.58	3.67	3.75
SUGAR BEETS AND SUGAR CANE										
<u>Goal:</u> To increase production of sugar beets and sugar cane to fulfill sugar needs of the people within the country and/or at least to reduce sugar imports a considerable amount.	3.50	3.38	3.61	--	3.11	3.75	3.67	3.75	--	3.67
<u>Objectives:</u>										
1. To increase acreage of sugar beets in prospective provinces and to introduce improved varieties and provide well organized farmer training program to increase the production of sugar beets from 70,000 tons to 135,000 tons and sugar cane from 62,000 tons to 68,000 tons by 1976.	3.16	3.22	3.61	3.27	3.27	3.67	3.41	3.66	3.66	3.58

TABLE V--(CONTINUED)

Goals and Objectives	Professional Group					International Students Group				
	Realistic	Clearly Formulated	Applicable	Quantifiable	Evaluation Potential	Realistic	Clearly Formulated	Applicable	Quantifiable	Evaluation Potential
2. To distribute totally 3,000 tons of both urea and DAP to the farmers growing sugar beet and sugar cane by 1976.	3.38	3.61	3.66	3.55	3.55	3.58	3.58	3.50	3.75	3.66
3. To increase the number of pilot plots by 30% to attract attention of farmers to practice modern methods of farming, fertilizer, and chemical application by 1976.	3.38	3.38	3.72	3.55	3.55	3.83	3.91	3.83	3.83	4.00
TRAINING TECHNICAL PERSONNEL										
<u>Goal:</u>										
To increase the number of extension workers and other technical personnel and train them with up-to-date information according to the need of each area to develop their knowledge and information to help farmers in a more satisfactory manner.										
	3.65	3.33	3.61	--	3.33	3.91	3.91	3.91	--	3.91
<u>Objectives:</u>										
1. To employ 1,950 extension workers to raise the total number to 4,000 by the end of 1976.	3.27	3.77	3.66	3.66	3.61	3.75	3.75	3.66	3.75	3.75
2. To offer one training center in each province for extension workers to train them with current knowledge and materials recommended by subject matter specialists at the beginning of each season by 1976.	3.61	3.27	3.66	3.55	3.44	3.75	3.75	3.75	3.83	3.83
3. To increase audio-visual and other educational facilities by 50% to expedite, ease, and increase productivity of training program by 1976.	3.44	3.50	3.55	3.50	3.50	3.66	3.83	3.66	3.83	3.66
4. To establish two educational courses within each unit and one seminar in province level in each three months.	3.50	3.44	3.44	3.33	3.33	3.83	3.83	3.75	3.75	3.91
5. To provide on-the-job training program by subject matter specialists touring at least twice a month to the units which are supervised by him.	3.61	3.66	3.66	3.61	3.55	4.00	3.83	3.75	3.75	3.83
INSEMINATION OF INFORMATION AND RESEARCH WORK THROUGH RADIO AND PUBLICATIONS										
<u>Goal:</u>										
To guide, teach, advise, and provide scientific information and research data and work to the farmers via mass media in order to develop their knowledge and thus increase their production and raise their standard of living.										
	3.55	3.50	3.61	--	3.36	3.75	3.58	3.66	--	3.66

TABLE V--(CONTINUED)

Goals and Objective	Professional Group					International Students Group				
	Realistic	Clearly Formulated	Applicable	Quantifiable	Evaluation Potential	Realistic	Clearly Formulated	Applicable	Quantifiable	Evaluation Potential
Objectives:										
1. To increase number of publications in following manner by August, 1975:										
--Agricultural extension type publications, two per month	3.22	3.61	3.61	3.44	3.38	3.66	3.66	3.75	3.83	3.83
--Pamphlets, according to the number of literate farmers for each crop	3.22	3.11	3.55	2.66	2.94	3.91	3.83	3.75	3.50	3.83
--Posters, of the required number	3.44	2.88	3.22	2.32	2.83	3.83	3.66	3.83	3.33	3.83
2. To expand radio program for the farmers and rural people from one hour to one and a half hours, airing more scientific and useful information by August, 1974.	3.44	3.55	3.61	3.50	3.50	3.58	3.58	3.58	3.66	3.66
3. To increase number of monthly "Karena" to the number of educated and key farmers by 1974.	3.55	3.16	3.55	2.77	3.11	3.50	3.50	3.33	3.33	3.33
EDUCATIONAL AND GUIDANCE CENTERS										
Goal:										
To train farmers and other people involved in agriculture in order to familiarize them with modern agricultural practices and solve their specific problems by demonstration and observation of demonstrational centers.	3.44	3.27	3.55	--	3.11	3.75	3.75	3.58	--	3.50
Objectives:										
1. To establish 100 additional demonstrational centers for the purpose of education and guidance of farmers by 1976.	3.22	3.66	3.55	3.66	3.55	3.75	3.75	3.66	3.75	3.75
2. To train 20 key farmers of each locality in each center to cooperate with extension workers in training other farmers and develop a leadership type program in agriculture by 1976.	3.77	3.50	3.61	3.72	3.61	3.83	3.83	3.66	3.66	3.58
3. To train 20 young farmers in agricultural marketing and agricultural cooperative areas as leading farmers in each locality by 1976.	3.44	3.44	3.72	3.72	3.55	3.66	3.75	3.58	3.75	3.58
4. To establish 12 educational guidance centers for the purpose of guidance and production of improved seeds as well as observational center by 1976.	3.55	3.50	3.61	3.72	3.61	3.83	3.83	3.83	3.75	3.91
5. To establish 120 well-organized farmers' committees to discuss and solve their problems among themselves and cooperate with extension workers in the development of an effective extension program for the rural areas by 1976.	3.27	3.33	3.50	3.55	3.38	3.75	3.66	3.50	3.66	3.58

TABLE V--(CONTINUED)

Goals and Objectives	Professional Group					International Students Group				
	Realistic	Clearly Formulated	Applicable	Quantifiable	Evaluation Potential	Realistic	Clearly Formulated	Applicable	Quantifiable	Evaluation Potential
PLANT PROTECTION AND DISEASE CONTROL										
GRASSHOPPER CONTROL										
<u>Goal:</u> To prevent grasshopper damage within the country and perform international responsibility in control of grasshoppers, especially with neighboring countries where the attack of grasshoppers is foreseen from country to country.	3.48	3.33	3.50	--	3.27	3.66	3.75	3.58	--	3.58
<u>Objectives:</u>										
1. To survey and explore 100% of the northern, northwest, south, and southwest areas where grasshoppers swarmingly attack the crops and lay eggs and to exchange the information obtained from the survey with neighboring countries by 1975.	3.27	3.38	3.50	3.61	3.50	3.58	3.66	3.41	3.66	3.41
2. To provide sufficient amounts of insecticide to spray 50% of the infested areas by the end of 1976.	3.38	3.55	3.50	3.44	3.55	3.41	3.66	3.58	3.58	3.41
3. To establish one center equipped with all control facilities in each surveyed area to control grasshoppers from time to time and prevent possible attack of grasshoppers from area to area and from outside of the home country and make the control more effective by 1976.	3.33	3.00	3.50	3.16	3.22	3.50	3.58	3.25	3.58	3.50
4. To train a number of technical personnel to fulfill 80% of the need for grasshopper control by 1976.	3.38	2.94	3.44	2.61	2.94	3.58	3.58	3.58	3.50	3.33
DISEASES, PESTS, AND OTHER INSECT CONTROL										
<u>Goal:</u> To control diseases and insects damaging the crops annually and prevent the spread of problems from area to area and thus increase total agricultural production.	3.44	3.33	3.61	--	3.27	3.75	3.66	3.58	--	3.50
<u>Objectives:</u>										
1. To initiate seed pre-treatment program in wheat growing areas and provide 13,000 Kg of chemicals to control bant diseases to the farmers by 1976.	3.38	3.44	3.55	3.55	3.44	3.83	3.66	3.58	3.66	3.58

TABLE V--(CONTINUED)

Goals and Objectives	Professional Group					International Students Group				
	Realistic	Clearly Formulated	Applicable	Quantifiable	Evaluation Potential	Realistic	Clearly Formulated	Applicable	Quantifiable	Evaluation Potential
2. To provide required amount of chemicals (coprovit, lime, and sulphur) for the control of anthracnosis and powdery mildew of 8 million vines in Kabul-Parwan area and 1 million vines in Song-Charak-Jawzjan province area by 1976.	3.33	3.16	3.50	3.22	3.22	3.50	3.58	3.33	3.41	3.33
3. To survey 80-90% of suspected areas to various diseases, insects (other than grasshoppers), and rodents by 1975.	3.44	3.44	3.55	3.44	3.44	3.58	3.50	3.50	3.66	3.58
4. To practice a quarantine program in the borders of the country to inspect 100% agricultural products imported and/or exported abroad by 1974.	2.59	3.44	3.61	3.33	3.38	3.66	3.75	3.58	3.75	3.50
MECHANIZATION OF AGRICULTURE										
<u>Goal:</u>										
To introduce mechanization and equip most of the farms of the farmers with modern equipment and thus change the traditional agriculture into modern and more productive agriculture, save man's energy consumption, and increase productivity of soil and land.	3.44	3.33	3.38	--	3.05	3.66	3.66	3.75	--	3.75
<u>Objectives:</u>										
1. To provide and introduce 4,250 sets of Ariana plows to the farmers of Herat, Helmand, Badghis, Faryab, Jawzjan, Balkh, Semengan, Baghlan, Kunduz, and Tekhar provinces by 1976.	3.33	3.44	3.61	3.66	3.61	3.58	3.50	3.66	3.75	3.75
2. To provide and introduce 400 additional medium-size tractors to the farmers of the country by 1976.	3.55	3.50	3.72	3.66	3.61	3.83	3.66	3.66	3.83	3.75
3. To provide 3,000 seats of fertilizer and seed, small size distributor machines and wheat thrashing machines to the farmers of the country by 1976.	3.55	3.22	3.44	3.44	3.50	3.58	3.66	3.58	3.66	3.66
4. To introduce 1,000 rice planters, harvesters, and thrashers to the rice growers by 1976.	3.33	3.44	3.61	3.50	3.50	3.58	3.50	3.50	3.58	3.41
5. To provide 500 seats of seed cleaners machines (in addition to the seed cleaning centers mentioned earlier) to the farmers by 1976.	3.44	3.55	3.66	3.77	3.61	3.66	3.66	3.41	3.41	3.41
6. To introduce 5,000 hand large sickles and scythes for harvest purposes of grain and forage crops by 1976.	3.44	3.66	3.61	3.77	3.61	3.50	3.50	3.41	3.66	3.58

TABLE V--(CONTINUED)

Goals and Objectives	Professional Group					International Students Group				
	Realistic	Clearly Formulated	Applicable	Quantifiable	Evaluation Potential	Realistic	Clearly Formulated	Applicable	Quantifiable	Evaluation Potential
7. To introduce 2,000 small sprayers to the farmers by 1976.	3.44	3.72	3.77	3.77	3.66	3.83	3.83	3.83	3.91	3.83
8. To provide 1,000 other miscellaneous tools and small equipment such as hoes, shovels, ricks, and so on to the farmers of the country by 1976.	3.66	3.66	3.61	3.72	3.50	3.75	3.75	3.66	3.66	3.75
TRAINING TECHNICAL PERSONNEL IN MECHANIZED AGRICULTURE										
<u>Objectives:</u>										
1. To train technical personnel in such a manner to fill 100% of the gap of personnel deficiency in those areas where farmers practice modern agricultural equipment and machines by 1976.	2.94	2.83	3.38	2.66	2.83	3.50	3.66	3.75	3.75	3.66
2. To improve 80% both qualitatively and quantitatively the existing situation of agricultural machines and equipment repair workshops and provide traveling repair workshop to meet 60% of the needs of repair work in farmers' farms by 1976.	3.00	3.00	3.44	3.05	3.11	3.50	3.58	3.58	3.58	3.58
3. To publish and provide pamphlets discussing the application of farm equipment in order to meet 100% of the needs of farmers practicing for machine and equipment by 1974.	2.66	2.66	3.38	2.77	2.72	3.50	3.33	3.41	3.41	3.41

2. Those goals and objectives which are averaged between 2.5 and 3.5 may be considered barely satisfactory. Yet one should attempt to find the weak point in the statement of the goals and objectives (for those criteria which are ranked low) which need to be corrected.

3. Objectives falling lower than a 2.50 average score need a complete restatement. One should consider that such objectives are vague enough to reduce the performance level. Correction and restatement of these goals and objectives are very necessary.

In general terms, international students scored the goals and objectives higher on each item than did the professional group. Among the total 79 objectives, 61 objectives were scored satisfactory (3.5 - 4) on all items, and 64 were scored satisfactory on three items. The professional groups scored nine objectives (objectives 2 and 5 in rice production, 8 and 9 in fruit production, 5 in training, 2 and 4 in education, and 2 and 8 in agricultural mechanization) higher (in the 3.5 - 4 range), and they scored 29 other objectives satisfactory on three items.

CHAPTER V

SUMMARY AND CONCLUSION

Effective and productive organizational operation to meet the individual, organizational, and societal needs is the number one goal of each organization. Achievement of this goal calls upon effective administration, better coordination among all staff members and personnel, incentive leadership, and, finally, healthy overall management. In addition to this, the characteristics of participative management are to involve personnel other than top management in decision making and program planning and let them express their opinions and suggestions and feel as though they are responsible persons to the organization and to society. In this case, their human potential is released, and each individual is motivated toward productive performance. The MBO system is one of the effective management approaches which encourages all the above desirable features.

From the different definitions given to MBO, the following commonalities are noticed:

1. Providing opportunity for both manager and subordinate to share their opinions in program planning.
2. Setting objectives to be achieved in a specific period of time.
3. Linking and blending the objectives in a more productive manner which could be measured.

4. Orienting objectives to the future with the full consent of both manager and subordinate.
5. Motivation and enthusiasm of involved personnel in better management.

MBO has the following objectives:

1. It is easily implemented by any type of organization and raises the level of performance.
2. It motivates the subordinates for better performance.
3. It asks for more participation of people, which means more alternatives are sought for better performances.
4. It gives a higher degree of clarity to the normal management functions of planning and control.
5. It improves relationships between managers and subordinates and eliminates threat and fear.
6. It is performance oriented rather than authority oriented.
7. It facilitates the general management area by formulation of goals and objectives which results in a higher performance level.
8. It facilitates appraisal and evaluation of performance.
9. It improves general management because individuals under this system are well aware of their responsibilities.

Implementation of MBO requires careful attention to be practiced with success. The following steps are thought necessary for this purpose:

1. Understanding the concept of MBO thoroughly.
2. Analysis of organizational performance, understanding the problems and recognition of needs.

3. Projection of organizational goals and objectives.
4. Conducting a meeting with higher level management for negotiation and agreement of organizational goals and objectives.
5. Mutual determination of subordinate job function and performance objectives.
6. Implementation of organizational goals and objectives.
7. Continuous mutual review of action.
8. Mutual assessment and evaluation of overall objectives.

The overall purpose of effective decision making is to select rationally, not emotionally, some alternatives and consequences which lead organizational operation toward an effective performance and satisfactory results from the performance. Better decision making brings a positive change in previous organizational operation according to the need of giving solutions to societal problems.

Diagnosis of problems and selection of alternatives are the basic elements of effective decision making, and this requires more attention. A decision maker has to make sure that the problem is carefully analyzed and thoroughly recognized; then a better alternative is selected, because both less understanding of the problem and the giving of poor alternatives to solving the problem have an adverse effect on overall performance and both situations create some additional problems and undesirable side effects.

The basic steps in decision making are reported as follow:

1. Recognition and analysis of the problem
2. Giving and finding a better solution to the problem
3. Follow-up
4. Feedback

Planning could be defined as a systematic effort of rational formulation and scheduling of objectives and goals and selection of better methods and alternatives to achieve the goals in the future according to the wishes of the organization.

Plans should be flexible enough to match the social, economical, and technological changes which occur from time to time in each society.

Program development in extension has to be education-oriented in order to positively change the behavior of the people in such a way as to help themselves in various aspects of life. Such changes are difficult to bring about on people's behaviors unless they are familiarized with the concept of changes. Once people understand that extension programs are to help them solve their problems, they tend to use their skills, knowledge, and their physical and mental ability for better utilization of natural resources. Extension programs cover better the needs of individuals. This helps involve more people and then motivates them to find a better way of life by their own efforts.

Implementation of MBO System in
Agricultural Extension of
Afghanistan

The investigator will attempt to implement the system in Afghanistan through adherence to the following:

1. First, the effort will be made in the investigator's own area of the organization--the program of in-service training for extension specialists.

2. A series of seminars will be held for the approximately 50 persons who are members of the training division.

3. Subordinates will be given opportunity to make input into the formulation of goals and objectives and will have a major role in the development of job performance objectives.

4. After two to three years of application within the extension in-service training division, an offer will be extended to provide information to the total Agricultural Extension Division.

Conclusions

In this study we reached the conclusion that:

1. An effective organizational operation is partially dependent upon effective program planning and partially on effective management.
2. Accurate program development requires involvement of all managerial personnel in the process of program planning in order to understand realistically their area of responsibility.
3. Extension type programs are educationally oriented to change the behavior of the people toward acceptance of new and scientific ideas to help themselves to raise their standard of living.
4. Effective decision calls upon a well diagnosed problem and then giving good alternatives to solve the problem in a better way.
5. Due to the numerous advantages of the MBO system over other types of management systems, it is agreed that MBO is an effective and more desirable system of management.
6. The MBO system is goal oriented; vague and unclear goals and objectives reduce the level of performance.

7. From the jury assessment of formulated goals and objectives under the MBO system, one can take into account that:
 - a. Those goals and objectives which have an average score of 3.5 to 4 are acceptable.
 - b. Those which are ranked with average scores between 2.5 and 3.5 need a little modification and restatement.
 - c. Those which fall below 2.5 need to be restated thoroughly.

Recommendations

Consideration of the following important points is recommended:

1. The extension program, to be effective, should be based on the people's needs and interests.
2. Implementation of the MBO system is recommended for better organizational operation and better performance.
3. For an effective MBO system, complete use of the eight steps of implementation (of the MBO system) is recommended.
4. For better performance under an MBO system, the top administration and management should develop and practice a confidential attitude toward and with subordinates; this is conducive of a warm atmosphere and enhancing of a positive relationship.
5. An impartial and consistent system of sanctions and rewards should be established. Prejudice and bias should be avoided as much as possible.
6. Individuals should be motivated to develop their self-confidence in such a way that all personnel in the organization accept responsibility, together achieving a better department or organization.

This effort should not be made only to secure the satisfaction of the boss and/or supervisor but for the achievement of organizational goals and, finally, meeting the needs of the people and the society.

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APPENDIX

TABLE VI
RELATIONSHIP OF EACH DIMENSION TO VARIOUS PARTS
OF THE PLANNING PROCESS

Planning Process	DIMENSIONS OF A PLAN												
	Com- plexity (G)	Signifi- cance (G)	Compre- hensiveness (M)	Timeliness (L ₊)	Specificity (L)	Comple- teness (L)	Flexibility (G)	Frequency (M)	Confidential/ nature (M)	Formality (G)	Authoriza- tion (M)	Ease of Implementa- tion (G)	Ease of Control* (C)*
A. Establish means for the early determination of need for formulating a new plan or revising an existing plan.	X	X	X	X	X	X			X	X	X	X	X
B. Take special care to prepare the proposal in terms easily understood by the approving agent. This may include the use of non-technical terms and examples to clarify the proposal.	X	X	X	X	X	X	X		X			X	
C. Include on the planning staff representatives who possess the necessary technical knowledge and experience not possessed by the planner.	X	X	X	X	X	X	X	X	X	X	X	X	X
D. Include on the planning staff representatives from major organization units which will be affected by the plan.	X	X	X	X	X	X	X	X		X	X	X	X
E. Make formal contact with cooperating units to insure understanding of the nature of the project and the role to be played by the cooperating units.	X	X	X	X		X	X		X	X	X	X	X
F. Use sophisticated tools for data collection and processing as well as for decision-making.	X	X		X				X		X			
G. Subject significant components of the plan to careful tests to determine the soundness of the plan and to discover possible difficulties in attempting to gain approval of the plan.	X	X	X	X	X	X	X		X	X		X	X
H. Prepare the final plan in such a way that it is not only technically accurate but also persuasive in nature and easy to understand by approving and implementing units.	X	X	X	X	X	X	X		X	X		X	X

* G = Greater; M = More; L₊ = Longer; L = Less.

Source: 23, pp. 54-55.

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JURY ASSESSMENT OF FORMULATED GOALS AND OBJECTIVES FOR EXTENSION SERVICE IN AFGHANISTAN

Names of Jury Members

Please rate each item in number:

- 4 Very good
- 3 Good
- 2 Fair
- 1 Poor
- 0 Not acceptable

Goals and Objectives	Realistic	Clearly Formulated	Applicable	Quantifiable	Evaluation Potential
<p>WHEAT PRODUCTION</p> <p><u>Goal:</u> To increase and improve wheat production in the country to meet the domestic need as well as to provide some excess for export.</p> <p><u>Objectives:</u></p> <ol style="list-style-type: none"> 1. To establish the following farms in different provinces for the purpose of improved seed production by 1975. <ul style="list-style-type: none"> --A 600 hectar farm in Chardiwari area of Ghazni Province --A 400 hectar farm in Tarnak area of Kandahar Province --A 100 hectar farm in Ningrahar Province --Improve Dashti Ashuqan farm of Kapisa, Parwan Province 2. To distribute totally 4,711,100 tons of urea and 97,350 tons of Di ammonium phosphate to wheat growers by the end of 1976. 					

Goals and Objectives (continued)	Realistic	Clearly Formulated	Applicable	Quantifiable	Evaluation Potential
3. To distribute 4,000 tons of different varieties of improved seed, according to climatic condition of each locality to the farmers by 1976.					
4. To plan a program of farmer guidance in production of improved seeds to involve 80% of farmers who practice improved varieties in the program by 1974.					
5. To raise knowledge of farmers on improved wheat cultural practices and farming methods by direct teaching, mass media, and information insemination to enable each wheat grower to maximize his yield from 85-90% compared to the past by 1976.					
6. To encourage and increase the number of farmers in production of improved seeds to meet 80% of the need of their own village and community by 1976.					
7. To grow totally 1,200 tons of improved seeds in mentioned governmental farms with application of 652 tons of urea and 1,097 tons of DAP for the purpose of improved seed production by 1976.					
8. To establish seed certification division within the Department of Agriculture Development and Extension to certify 80-90% of all seeds in the country by the end of 1974.					
9. To re-operate seed cleaning centers in Kabul, Baghlan, Kandahar, Herat, and Balkh provinces in order to clean 70-80% of the improved varieties of seed by 1975.					
CORN PRODUCTION					
<u>Goal:</u>					
To increase total production of corn to make the country self-sufficient and improve the quality of corn both for food and feed purposes.					
<u>Objectives:</u>					
1. To provide 1,680 tons of improved varieties of corn seed and distribute to the farmer by 1976.					

Goals and Objectives (continued)	Realistic	Clearly Formulated	Applicable	Quantifiable	Evaluation Potential
2. To grow 25 tons of improved varieties on governmental farms for the purpose of improved seed production by 1976.					
3. To distribute totally 11,094 tons of urea and 4,646 tons of DAP to corn growers by 1976.					
4. To increase number of demonstrational plots by 50% in the end of 1975.					
5. To raise level of knowledge of farmers in corn modern and improved methods of growing to maximize average yield of corn by 70-80% compared to previous years by 1976.					
RICE PRODUCTION					
<u>Goal:</u>					
To increase total production of rice to make the country self-sufficient and improve the quality of rice by introduction of improved higher yield varieties.					
<u>Objectives:</u>					
1. To crop 23 tons of improved varieties in governmental farms with application of 26 tons of urea and 15 tons of DAP by 1976.					
2. To distribute 990 tons of improved seeds and 2856 tons of urea and 1,821 tons of DAP to the farmers by 1976.					
3. To increase the percentage of demonstrational plots by 50% by the end of 1976.					
4. To convince 80% of the farmers to grow improved varieties by the end of 1976.					
5. To establish a cooperative-type program for the village farmers to sell their produced rice 20-30% via cooperatives by the end of 1976.					

Goals and Objectives (continued)	Realistic	Clearly Formulated	Applicable	Quantifiable	Evaluation Potential
FRUIT AND VEGETABLE PRODUCTION FRUITS					
<u>Goal:</u> To increase productivity of fruit trees and improve the quality by introduction and distribution of improved high yield varieties of fruit to the farmers and control of insects and disease throughout the country in order to increase the supply of good quality fruit to foreign and local markets.					
<u>Objectives:</u>					
1. To introduce and familiarize farmers with modern cultural practices such as pollination, distance between trees, weed control, scientific pruning, fertilizer application in such a manner to increase fruit production of each locality 80% by the end of 1976.					
2. To control 60-80% diseases and insects in both governmental and private orchards by most economic chemicals and methods by 1976.					
3. To establish 84 demonstrational almond orchards in Zabul, Balkh, Semangan, and Chardighorband Parwan provinces with planting totally 6,320 improved trees and application of 672 tons of urea and 712 tons of DAP by the end of 1976.					
4. To distribute 136,200 improved varieties of almond trees to the farmers in Bulkh, Semangan, and Zabul provinces by 1976.					
5. To establish 50 nurseries in required areas in order to provide 80% of improved fruit trees for the farmers by the end of 1976.					
6. To distribute 11,760 tons of urea and 12,220 tons of DAP to the grape and almond growing farmers by 1976.					
7. To apply grafting in totally 140,000 trees of almonds in Zabul, Balkh, Semangan, and Parwan provinces by 1976.					

Goals and Objectives (continued)	Realistic	Clearly Formulated	Applicable	Quantifiable	Evaluation Potential
8. To establish at least one small cooperative type market (conducted by unit supervisor) within each fruit producing area to facilitate transportation of fruit to main market without damage by 1975.					
9. To build a storage for maintenance of fruit and vegetables in Kabul area and complete the construction 100% by 1976.					
VEGETABLES					
<u>Goal:</u>					
To grow sufficient amounts of vegetables to fulfill the need of the country by introduction of new and improved varieties of vegetables to the farmers and train farmers to obtain higher yields from their vegetable crops.					
<u>Objectives:</u>					
1. To introduce improved resistant to diseases and more productive varieties of vegetables to be grown in 4,309 hectares by 1976.					
2. To increase 80% of the total production of vegetables by encouraging and training farmers to practice new methods of cultivation, fertilizer application, chemical application to control diseases, insects, and weeds by 1976.					
3. To introduce resistant-to-cold varieties in cold areas in order to meet 10% needs of deficiencies of vegetables during cold seasons by 1976.					
4. To provide 5% of radiated seeds of vegetables at the beginning and grow them in at least 50 demonstrational plots for the purpose of observation and distribution of starting plants (seedlings) to the farmers by 1975.					
5. To distribute 1,354 tons of improved potatoes with 16 tons of urea and 15 tons of DAP to the farmers by 1976.					

Goals and Objectives (continued)	Realistic	Clearly Formulated	Applicable	Quantifiable	Evaluation Potential
FIBERS AND INDUSTRIAL CROPS COTTON					
<u>Goal:</u> To increase total production of cotton to develop textile and oil industries of the country and to export the excess to foreign countries.					
<u>Objectives:</u>					
1. To crop 100 tons of improved varieties of cotton annually in 1,900 hectares in Kunduz, Balkh, Herat, and Faryob provinces to provide improved high germinated seeds to the farmers.					
2. To introduce 10,828 tons of high yield and superior quality varieties according to their adaptation to different climates to cotton growing farmers by 1976.					
3. To distribute 22,000 tons of urea and 5,762 tons of DAP to the farmers by 1976.					
4. To introduce 4,250 Ariana plows and encourage farmers in cold areas to grow 14,900 hectares of short season cotton by 1976.					
5. To increase the number of pilot plots by 30% within farmers' farms compared to present time in each locality by 1975.					
6. To train at least 60% of cotton growing farmers to practice modern practices, apply chemicals for insects and disease control, sorting according to the standards of textile and oil mill industries by 1976.					
SUGAR BEETS AND SUGAR CANE					
<u>Goal:</u> To increase production of sugar beets and sugar cane to fulfill sugar needs of the people within the country and/or at least to reduce sugar imports a considerable amount.					

Goals and Objectives (continued)	Realistic	Clearly Formulated	Applicable	Quantifiable	Evaluation Potential
<p><u>Objectives:</u></p> <ol style="list-style-type: none"> 1. To increase acreage of sugar beets in prospective provinces and to introduce improved varieties and provide well organized farmer training program to increase the production of sugar beets from 70,000 tons to 135,000 tons and sugar cane from 62,000 tons to 68,000 tons by 1976. 2. To distribute totally 3,000 tons of both urea and DAP to the farmers by 1976. 3. To increase the number of pilot plots by 30% to attract attention of farmers to practice modern methods of farming fertilizer and chemical application by 1976. 					
<p>TRAINING TECHNICAL PERSONNEL</p>					
<p><u>Goal:</u></p> <p>To increase the number of extension workers and other technical personnel and train them with up-to-date information according to the need of each area to develop their knowledge and information to help farmers in a more satisfactory manner.</p>					
<p><u>Objectives:</u></p> <ol style="list-style-type: none"> 1. To employ 1,950 extension workers to raise the total number of 4,000 by the end of 1976. 2. To establish one training center in each province for extension workers to train them with current knowledge and materials recommended by subject matter specialists at the beginning of each season by 1976. 3. To increase audio-visual and other educational facilities by 50% to expedite, ease, and increase productivity of training program by 1976. 4. To establish two educational courses within each unit and one seminar in province level in each three months. 					

Goals and Objectives (continued)	Realistic	Clearly Formulated	Applicable	Quantifiable	Evaluation Potential
<p>5. To provide on-the-job training program by subject matter specialists touring at least twice a month to the units which are supervised by him.</p>					
<p>INSEMINATION OF INFORMATION AND RESEARCH WORK THROUGH RADIO AND PUBLICATIONS</p> <p><u>Goal:</u> To guide, teach, advise, and provide scientific information and research data and work to the farmers via mass media in order to develop their knowledge and thus increase their production and raise their standard of living.</p> <p><u>Objectives:</u></p> <ol style="list-style-type: none"> 1. To increase number of publications in following manner by August, 1975: <ul style="list-style-type: none"> --Agricultural extension type publications, two per month --Pamphlets, according to the number of literate farmers for each crop --Posters, to the required number 2. To expand radio program for the farmers and rural people from one hour to one and a half hours, airing more scientific and useful information by August, 1974. 3. To increase number of monthly "Karena" to the number of educated and key farmers by 1974. 					
<p>EDUCATIONAL AND GUIDANCE CENTERS</p> <p><u>Goal:</u> To train farmers and other involved people in agriculture in order to familiarize them with modern agricultural practices and solve their specific problems by demonstration and observation of demonstrational centers.</p> <p><u>Objectives:</u></p> <ol style="list-style-type: none"> 1. To establish 100 additional demonstrational centers for the purpose of education and guidance of farmers by 1976. 					

Goals and Objectives (continued)	Realistic	Clearly Formulated	Applicable	Quantifiable	Evaluation Potential
2. To train 20 key farmers of each locality in each center to cooperate with extension workers in training other farmers and develop a leadership type program in agriculture by 1976.					
3. To train 20 young farmers in agricultural marketing and agricultural cooperative areas as leading farmers in each locality by 1976.					
4. To establish 12 educational guidance centers for the purpose of guidance and production of improved seeds as well as observational center by 1976.					
5. To establish well organized 120 farmers committees to discuss and solve their problems among themselves and cooperate with extension workers in the development of a productive extension program for the rural areas by 1976.					
PLANT PROTECTION AND DISEASE CONTROL GRASSHOPPER CONTROL					
<u>Goal:</u> To control grasshopper damage within the country and perform international responsibility in control of grasshoppers, especially with neighboring countries where the attack of grasshoppers is foreseen from country to country.					
<u>Objectives:</u> 1. To survey and explore 100% of the northern, northwest, south, and southwest areas where grasshoppers swarmingly attack the crops and lay eggs and to provide and exchange the information obtained from the survey with neighboring countries by 1975.					
2. To provide sufficient amounts of insecticide to spray 50% of surveyed areas by the end of 1976.					

Goals and Objectives (continued)	Realistic	Clearly Formulated	Applicable	Quantifiable	Evaluation Potential
3. To establish one center equipped with all control facilities in each surveyed area to control grasshoppers from time to time and prevent possible attack of grasshoppers from area to area and from outside to the country and make the control more effective by 1976.					
4. To train a number of technical personnel to fulfill the need of grasshopper control program at least 80% by 1976.					
DISEASES, PESTS, AND OTHER INSECT CONTROL					
<u>Goal:</u>					
To control diseases and insects damaging the crops annually and prevent the spread of problems from area to area and thus increase total agricultural production.					
<u>Objectives:</u>					
1. To apply seed pre-treatment program in wheat growing areas and provide 13,000 Kg of chemicals to control rust diseases to the farmers by 1976.					
2. To provide required amount of chemicals (coprovit, lime, and sulphur) for the control of anthracnosis and powdery mildew of 8 million vines in Kabul-Parwan area and 1 million vines in Song-Charak-Jawzjan province area by 1976.					
3. To survey 80-90% of suspected areas to various diseases, insects (other than grasshoppers), and rodents by 1975.					
4. To practice a quarantine program in the borders of the country to inspect 100% agricultural products importing and/or exporting abroad by 1974.					

Goals and Objectives (continued)	Realistic	Clearly Formulated	Applicable	Quantifiable	Evaluation Potential
MECHANIZATION OF AGRICULTURE					
<p><u>Goal:</u> To introduce mechanization and equip most of the farms of the farmers with modern equipment and thus change the traditional agriculture into modern and more productive agriculture, save man's energy consumption, and increase productivity of soil and land.</p>					
<p><u>Objectives:</u></p> <ol style="list-style-type: none"> 1. To provide and introduce 4,250 seats of Ariana plow to the farmers of Herat, Helmand, Badghis, Faryab, Jowzjan, Balkh, Semengan, Baghlan, Kunduz, and Tekhar provinces by 1976. 2. To provide and introduce 400 medium-size tractors to the farmers of the country by 1976. 3. To provide 3,000 seats of fertilizer and seed small size distributors machines and wheat thrashing machines to the farmers of the country by 1976. 4. To introduce 1,000 rice planters, harvesters, and thrashers to the rice growers by 1976. 5. To provide 500 seats of seed cleaners machines (in addition to the seed cleaning centers mentioned earlier) to the farmers by 1976. 6. To introduce 5,000 hand large sickles and scythes for harvest purposes of grain and forage crops by 1976. 7. To introduce 2,000 small sprayers to the farmers by 1976. 8. To provide 1,000 other miscellaneous tools and small equipment such as hoes, shovels, ricks, and so on to the farmers of the country by 1976. 					

Goals and Objectives (continued)	Realistic	Clearly Formulated	Applicable	Quantifiable	Evaluation Potential
<p>TRAINING TECHNICAL PERSONNEL</p> <p><u>Objectives:</u></p> <ol style="list-style-type: none"> 1. To train technical personnel in such a manner to fill 100% of the gap of personnel deficiency in those areas where farmers practice modern agricultural equipment and machines by 1976. 2. To improve 80% both qualitatively and quantitatively the existing situation of agricultural machines and equipment repair workshops and provide traveling repair workshop to meet 60% of the needs of repair work in farmers' farms by 1976. 3. To publish and provide pamphlets discussing the application of farm equipment in order to meet 100% of the needs of farmers practicing for machine and equipment by 1974. 					

VITA ۲

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