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"DISTANT COUSINS"

**AN
EVALUATION OF
OFFICIAL AND NON-OFFICIAL
SOURCES OF AGRICULTURAL
INFORMATION**

BY

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"A communication system is as powerful as its weakest link."

Information Theory

"In this world, the strong do what they are able to do and weak do what they have to do."

Thucydides

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EXECUTIVE SUMMARY

This report presents information collected during the Phase II of the Communication Management Studies. Its major focus is an evaluation of farmers' official and non-official sources of agricultural information in Punjab, Pakistan.

In parallel to the major emphasis of the study an analytical observation was included into the report to explore the potentials for mutual agenda setting by farmers, public and private sectors.

This investigation was conducted as a second step in accordance to user (farmer)-oriented communication model developed during the Phase I of the Communication Studies.

One of the most significant findings of Phase I was that farmers who cooperated in the study were vigorous seekers of information. They were using interpersonal and mass communication channels to gather new agricultural information and knowledge to improve their business.

The sources used most in information gathering were fellow farmers and private market representatives (91% and 65% respectively). The interaction between farmers and official sources of agricultural information was low. The radio as a mass medium was frequently utilized by farmers in agricultural information gathering (76%).

The present study was implemented in three stages:

1. An evaluation of organizational structure and internal communication patterns of the Department of Agriculture, Punjab;
2. A follow-up study of the information exchange process among farmers for agenda setting;
3. And a series of free-flow interviews with farmers and officials on issues related to agriculture.

A sample of 81 employees of the Department of Agriculture posted at Sheikhpura, Shahkot, Haroonabad and Vehari were interviewed. The measuring instrument included items on (a) demographic background and professional development, (b) job satisfaction, (c) employee's perceptions of organizational structure, (d) problem recognition, (e) constraint recognition and (f) perceptions of internal communication patterns by the employees.

The follow-up study included 42 farmers in the sample from Niazbeg and Shahkot sub-projects of the Command Water Management Project, Punjab. The questionnaire contained measures on (a) demographics, (b) land-tenureship, (c) interaction of farmers' family members on agenda setting, (d) interaction with non-family members on agenda setting, (e) sociometric relationships with fellow farmers and others on agenda setting, (f) evaluation of agricultural information received from fellow farmers and others for agenda setting.

The following are the highlights of the study's findings:

- * The Department of Agriculture is a rigidly structured organization. The core dominates the peripheries.
- * Job satisfaction among the employees is low in those areas such as career mobility and departmental support for the welfare of the employees.
- * The social mores and norms of Pakistani society are very much intact in the structure of the Department. The stratification among the ranks is quite rigid.
- * The promotional process is slow and deliberate. The merit is considered as a de jure requirement. However, top echelons quite often implement de facto rules in congruence to the social mores of the society in employee promotions.
- * The employees of the Department are interested in making changes in their jobs, communicating better with farmers, being able to make autonomous decisions in transfer of technologies and including farmers in the decision making process. However, the strong grip of

the core on the peripheries stunts the ideas and desires of the employees to experiment "new" and "different" ways. There is a feeling of intellectual impotence among the employees in the peripheries.

- * In accordance with its structural characteristics the patterns of internal communication in the Department is asymmetric (geared to control rather than to create an understanding) and top-to-bottom.
- * On the other hand, in the farming communities the communication is relaxed. The communication between farmers seems to be more on the professional order. The members of an occupation talking to each other as colleagues.
- * The agenda setting by the farmers starts at home. Among the family members the son is the most frequently consulted member. The wife runs as a fairly strong second to the male child in the family pecking order in agenda setting.
- * The second information source outside the family in agenda setting is the fellow farmer on the watercourse.
- * Farmers use multiple sources in addition to their frequently contacted ones in their information gathering on agenda setting.
- * Farmers sort information very carefully for its usefulness.
- * The use of official sources of information are not excluded by farmers in agenda setting. But their use is low in comparison to the fellow farmers.
- * Private market sources are also used with high frequency in information gathering to set agendas.
- * The business interest in the farming is genuine. The profit making as a motivation for farming is common among the farmers.
- * The demographic backgrounds of farmers and officials are in stark contrast. Two groups of people and almost two different worlds. Officials mainly come from upwardly mobile, fairly well educated rural families. Their children are universally educated and are in the transition period in becoming urbanites. Education in farmers' families run low. Farming is a major occupation. Farmers' children do not have the same

educational attainment (may be opportunities) as do the children of employees.

- * Women in both officials' and farmers' families are mainly confined to the traditional role of housewifery.

In light of the findings listed above a restructuring of the Department of Agriculture was recommended. Presently the recommendation is at a conceptual stage. The implementation procedures of the restructuring recommendations have to be investigated at stage III of the Communication Management Studies. However, the urgent need for the initiation of mutual agenda setting process between the agricultural bureaucracy and farmers may require action in the near future by the concerned parties.

CHAPTER I

INTRODUCTION

***"Extension workers too are in the business
of persuasion."* (my emphasis)**

Murphy and Marchant¹

A. AGENDA SETTING: CORE vs PERIPHERY

Sometimes farmers make remarks such as "I've never seen a field assistant in my life." I counter by asking them "Why don't you go to him? You must've needed some help sometime in your life." Farmers respond in the negative: "No need," "No time," "Poor farmer. Extension agent doesn't pay attention to me," "I go to my farmer friends."² In fact extension services try to reach to farmers with either small or large land holdings. But the methods, quality and frequency of these services somehow do not sit well with some farmers. The negative remarks made by those in my interviews reflect the symptoms of deep frustration of not being able to establish a common agenda with extension staff. Because of this discrepancy between agendas, farmers turn to their fellow farmers with whom they share a common concern and mutual understanding.³ There exists a communication gap at the farm gate between farmers and farm level officials.

During the Phase I of Communication Management Studies, I proposed the working hypotheses:

- a. Regardless of their farm size and their operational ties to bureaucracy, farmers on government owned and operated irrigation systems are managers of their own agribusiness; and

- b. Because of their business concerns, farmers on these systems will need and seek new agricultural information, knowledge and practices to improve their business.⁴

Agenda setting is a crucial aspect of business. Farmers as business managers do set agendas for their farm operation. In their pragmatic ways they discuss their agendas with the immediate family members, neighbors, and trusted fellow farmers before implementation. Having no business insurance and most of the time no financial reserves to fall back on, small farmers approach their agenda gingerly. To a small farmer his agenda is the guide to survival.⁵

On the other hand, bureaucratic agendas are set in a rather complex procedure. The tiers of bureaucracy are compartmentalized and communication within and between bureaucratic tiers do not at all resemble the face-to-face communication between farmers. Organizational communication in bureaucratic settings in low income countries is rather rigid, slow moving and flows from the core to the peripheries. For example, a field assistant in a low income country, posted in a remote, isolated area, seldom, if ever, has the opportunity to communicate directly with the bureaucratic core. He receives messages to pass to farmers. Inputs by the field staff in preparation of these agendas are limited. The agenda is set for them at the core. Most of the time these agendas set by the core are global and have limited relevance to the socio-economic realities of the peripheries. The result, is the gap between the core's and the farmers' agendas. They don't meet.

Farmers blame the field staff for their lack of understanding of the farm gate agenda. But the field staff are the messengers, not the agenda setters.

I believe, in low income countries one of the persistent and impeding issues in the process of technology transfer in agriculture is the gap between agendas set by the bureaucratic core and farmers.⁶ (Please refer to Figure 1 on the next page for a graphic description of present agenda setting)

This study was designed to collect systematic information on:

1. Communication patterns and organizational communication in the Department of Agriculture in the Province of Punjab, Pakistan;
2. Farmers' interaction with "other farmers" and non-farm people in local agenda setting; and
3. Views of farmers, officials and private sector representatives on agricultural issues.

B. WHITHER AGRICULTURAL EXTENSION?

The United States Department of Agriculture (USDA) was established because of the pressures from farmers in the latter part of the nineteenth century. Baxter, et al., state:

Today's extension service activities in Western Europe and the United States have their origin in general agricultural promotion and education activities that date from the early nineteenth century. These initiatives were largely privately sponsored, and included the creation of agricultural societies. It was largely demand from farmers and their organizations which led to increasing government involvement in agricultural technology generation and transfer towards the end of the nineteenth century, usually first in agricultural research then in extension.⁷ (my emphasis)

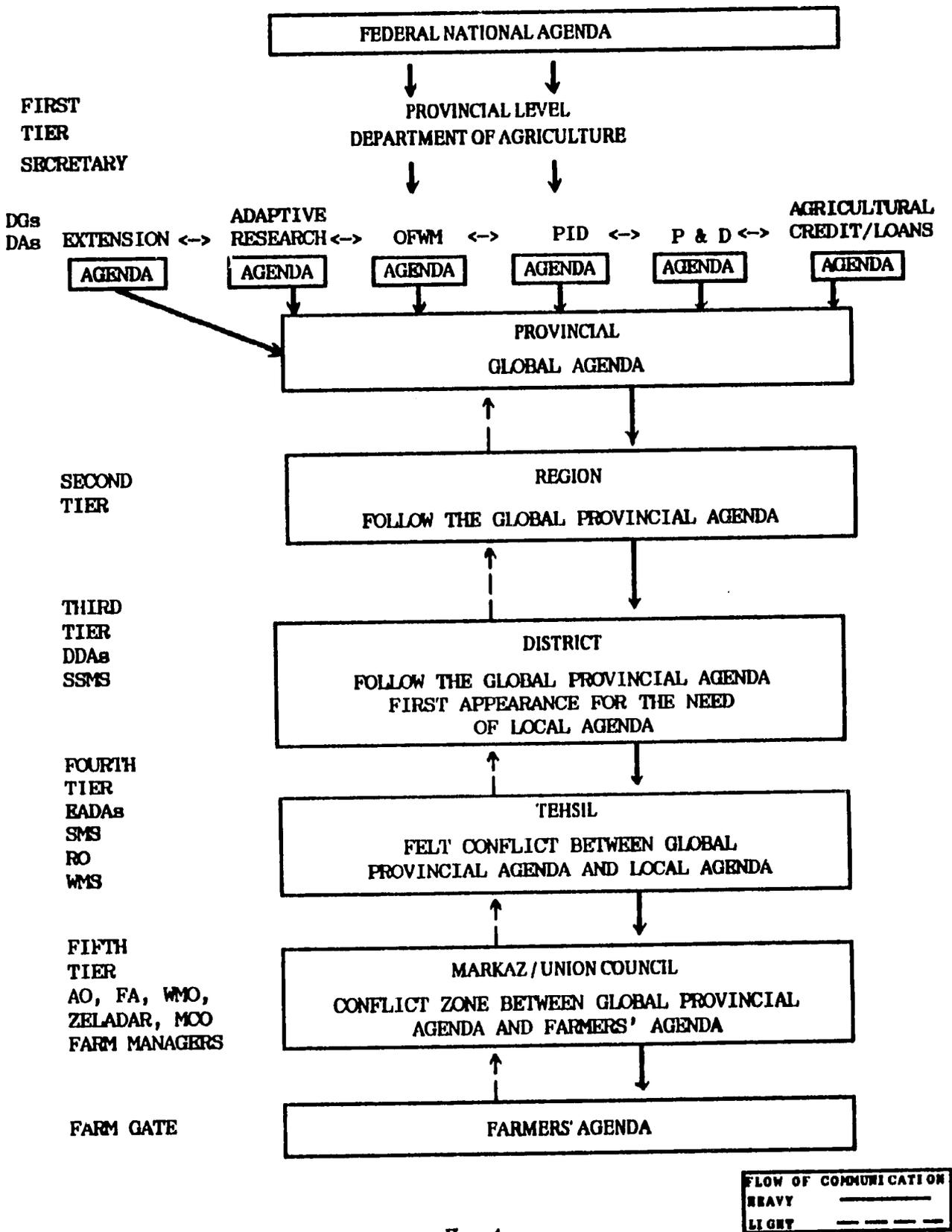


Figure 1

FLOW CHART OF COMMUNICATION ON PRESENT AGENDA SETTING

- 4 -

As an outgrowth of farmers' demand agricultural extension in the West was service oriented. When there were few communication outlets available for farmers in the United States extension served as a link between research centers in land-grant colleges and farmers. In the middle parts of this century agriculture in the United States made progress partly because of the responsive approach taken by the extension services to the needs of farmers. Today the American farmer has a multitude of communication channels besides extension to seek and receive information to improve his agribusiness. However, extension still operates as a potential service organization whenever farmers need information.

The agricultural agencies in low income countries were established during the colonial period.⁸ Befitting to colonial objectives agricultural production was seen as a state enterprise by the colonial regimes. Farmers were regulated to meet the export quotas of selected crops. In contrast to Western style extension, the transfer of technology was geared to benefit the regime not the farmer. And extension agents were used as conveyer belts to enforce the governmental regulations. Baxter, et al., :

[in the colonial governments] agricultural officers and their staff were closely bound to the work of the administrative service and much of their work was concerned with revenue collection and enforcing regulations on such matters as soil conservation and animal health ...Extension methods were generally imperious and regulative. Training was centered on "progressive" farmers. The establishment of settlement schemes reinforced this style.⁹

During the early decades of post-colonial period there was a rush for national development in the low income countries. The economic aid from ex-colonial and other

Western countries spurred activities in the rural sectors. Basically agrarian, low income countries were planning changes in agricultural technologies to increase production and to create an economic base for industrial development. The transfer of Western technologies to the rural sector took a primary importance. Complementing the activities of foreign donor agencies the theoretical approaches to societal change were blooming in the West. A trend in Western thinking "induced change" took precedence over alternative change models. And the diffusion of innovations model became a dominant paradigm in agricultural development.⁹ The low income countries took the tenets of diffusion model as the leading guide in their extension strategies. The diffusion model was a one-way, persuasive type of communication process where the extension field staff were used as conveyor belts. Farmers were targeted with official recommendations to innovate new agricultural practices. Not much attention was paid to farmers' socio-economic capabilities with regards to adoption of new technologies. Farmers were "talked to" but seldom listened to. Those farmers who could not cope economically to adopt were labeled as "laggards." And progressive or innovative farmer became a pet of the agricultural bureaucracy. His farm served as a show case to demonstrate the progress made in agriculture. However, research conducted in the last decade shows that the progressive farmer is, most of the time, economically superior to those who cannot adopt new practices fast.¹⁰ It took 14 years for hybrid corn to diffuse to all farmers in Iowa in the United States.¹¹

The consequences of extension services modeled after diffusion of innovations theory has often been injurious to small farmers in low income countries. Presently governments in low income countries are experimenting with alternative extension strategies.

One of the prevalent alternative extension methods presently being implemented in low income countries is the World Bank originated Training and Visit System. Sometimes referred to as the Benor System after its designer Daniel Benor the T & V was first applied in Turkey and India in the early seventies. Since then the T & V system has been disseminated to other low income countries.

The basic features which distinguishes the T & V from traditional extension services are:

1. Emphasis on teaching.
2. Emphasis on linking the field to research centers:
Liaison function (addition of second conveyor belt).

As Benor, et al., explain:

The basic feature of the training and visit (T & V) system of agricultural extension is a systematic program of training for the Village Extension Worker (VEW), combined with frequent visits to farmers' fields. In the field, the VEW teaches farmers recommended agricultural practices, motivates them to adopt some on their fields, and evaluates production constraints and advises farmers how to overcome them... at the subdivision level the Subdivisional Extension Officer (SDEO) has a team of Subject Matter Specialists (SMS) assigned to his subdivision. Each team has initially at least three specialists, one each for agronomy, and plant protection and a Training Officer. The work of SMSs is divided into three equal parts: training VEWs and AEOs... making field visits... and being trained themselves, mainly by research... and by conducting farm trials.¹² (my emphasis)

In the implementation of T & V in Pakistan, the Field Assistant meets with contact farmers and other farmers in every fortnight to teach them recommended practices and to

record their inquiries on related problems. He then relays farmers' inquiries to his Agricultural Officer (AO). In their fortnightly training sessions AOs and FAs discuss the problems with Subject Matter Specialists (SMS) and Senior Subject Matter Specialists (SSMS). Finally the messages are relayed back to farmers by FAs in the next fortnightly meeting. In this context FAs play both teacher and liaison functions.

It takes time for the T & V system to be adjusted to a country's requirements. For example the research results presented by Sukaryo at the Asian Regional Workshop on the T & V System does not exactly meet the stated objectives of Benor and his co-authors. (Please refer to Figure 2 on page 9)¹³

Sukaryo's figure shows that as the messages transmitted further through relay points from field assistant to farmers the frequency decreases. The progressive farmers are getting the highest number of messages (96.9). The contact farmers receive the second highest (81.3). Then the flow slows down considerably. In Sukaryo's terms "the follower farmers" are receiving less than half the flow of information received by either progressives or contact farmers. Contact farmers' contribution to follower farmers is one fourth of what they receive from the field assistant. And progressive farmers do not seem to seriously contribute to the knowledge of follower farmers. The feedback from "follower farmers" is negligible. As Sukaryo states:

The percentages of messages transmitted show that the progressive farmers have played a small role in conveying technology from the FEW to the followers. The original concept was that every progressive farmer would convey technological information to the five neighboring farmers whose fields surrounds his own: if twenty progressive farmers get the information directly

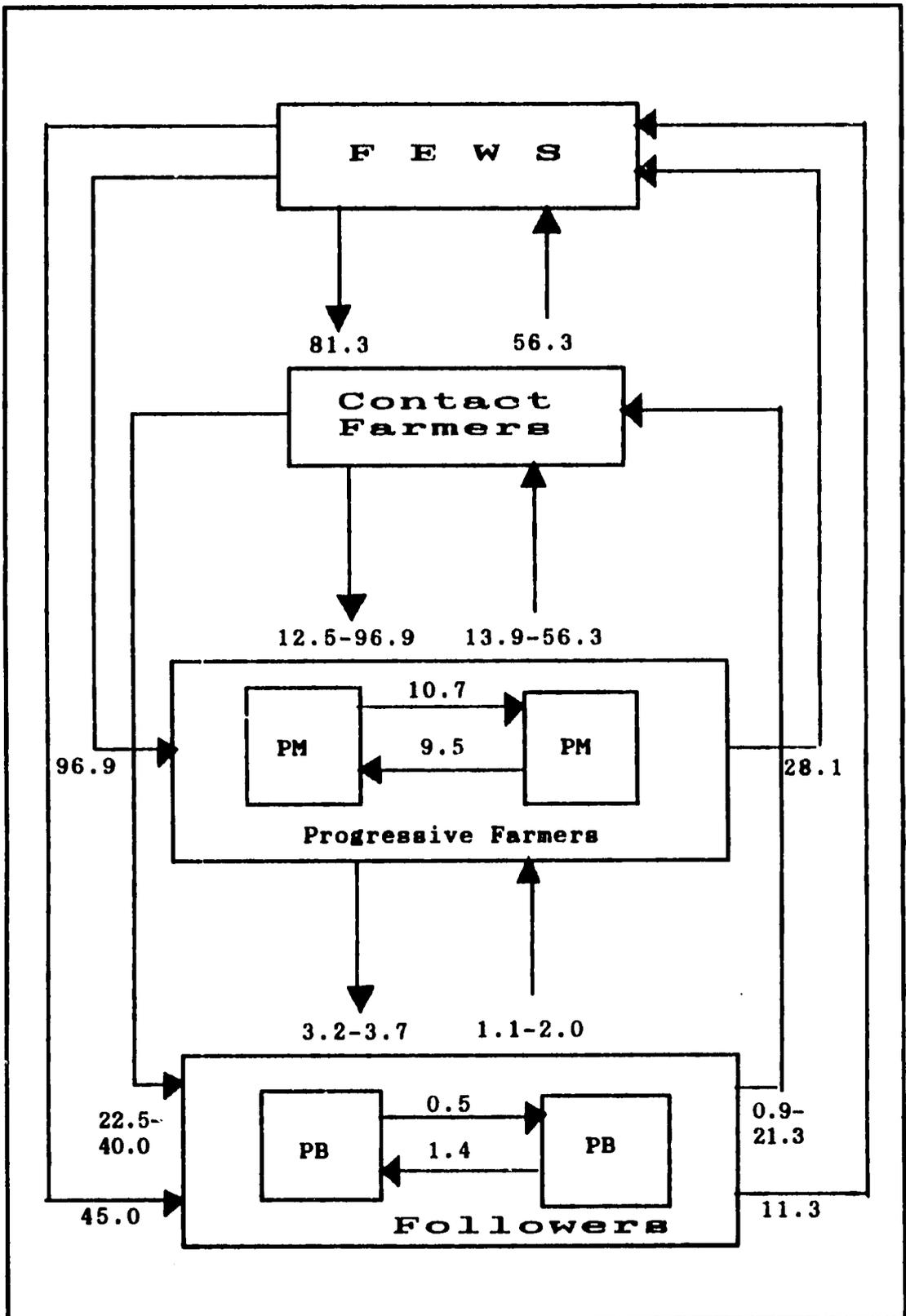


Figure 2

from the FEW, and if every progressive farmer conveys the information to five followers, then all farmers in the group would get similar information from the extension workers. In practice, however, followers are getting most of their information directly either from the FEW or the contact farmer.¹⁴

One example from one country does not render a system to be considered ineffective. The T & V has new and improved features over the diffusional extension methods. However, as is the case with any other system, the T & V also has its shortcomings which can be improved. As Cernea, et al., explain:

Extension programs will therefore benefit by encouraging greater farmer participation, thus adding a third dimension to the research-extension linkage. This point is stressed because it is here that existing T & V services are often still weak and still too "top down" in their approach. It is only with a more participatory approach that both research programs and extension recommendations can be made more relevant to farmers' needs.¹⁵ (my emphasis)

I believe agricultural extension is one of the necessary information outlets in developmental communication. However the communication methods in extension, so far, has been rather patronizing. If one accepts the fact that farmers are mature adults managing their own business, then the approach to extension strategies can be altered accordingly. Farmers are human capital of low income countries. Investment in farmers can be profitable business.

Discussing the importance of investment in human capital Schultz comments:

I have been impressed by repeatedly expressed judgments, especially by those who have a responsibility in making capital available to poor countries, about the low rate at which these countries can absorb additional capital. New capital from outside can be put to good use, it is said, only when it is added "slowly and gradually." But this experience is at variance with the widely held impression that countries are poor fundamentally because they are starved for capital and that additional capital is truly key to their more rapid economic growth. The reconciliation is again I believe, to be found in emphasis on particular forms of capital. The new capital available to these countries from outside as a rule goes into the formation of structures, equipment and sometimes also into inventories. But it is generally not available for additional investment in man. Consequently, human capabilities do not stay abreast of physical capital, and they do become limiting factors in economic growth.¹⁶ (my emphasis)

One of the pre-requisites of investing in human capital is understanding the environment, actions and needs of humans in whom the capital is to be invested. The intended users of capital investment in development, for a long time, have not been given an opportunity to voice their needs and agendas. Basically core-oriented agricultural extension system is designed to implement blueprints. Such a system does not have capabilities to accommodate participation of the users in the preparation and implementation of its projects. Korten describes the project approach:

The projects by nature deal with time bounded start-up costs and emphasize facilities and equipment to the

neglect of the development and funding of capacities for sustained operation and maintenance... Furthermore it virtually ensures that the real decisions will remain with professional technicians and government bureaucrats neither of whom are rewarded for being responsive to local conditions nor contributing towards the development of local institutional capacities.¹⁷

Korten suggests that Third World development assistance programs must be part of a holistically perceived learning process as opposed to a bureaucratically mandated blueprint design.¹⁸

In my user-oriented communication model I stated that the user must not just accept the new agricultural information, knowledge and practices but must internalize them, making them a part of his routine behavior and investing in them his own energy and enthusiasm. The user will be more likely to internalize an innovation that he sees as his own. He also is more likely to accept those innovations that meet his own specific needs or that he has worked on himself to adopt to a specific need. To achieve such an understanding with users a development must have its roots within the user sub-system. It has to be need oriented. User participation through a systematic information flow into the system management has to be maintained. Such a management system is called a learning organization. Korten describes a learning organization:

Its requirement is for organizations with well developed capacity for responsive and anticipatory adaptation--organizations that (a) embrace error; (b) plan with people; and (c) link knowledge building with action.¹⁹

Changes are needed in organizational structures and attitudes of extension agencies to incorporate attributes Korten describes. In these extension agencies unless

procedures to incorporate farmers' agenda into planning and implementation is not achieved the progress will be low and slow.

C. ORGANIZATIONAL COMMUNICATION

A good way to understand the mechanics of organizational communication may be to take a close look at the patterns of communication in nuclear families. As part of a macro system, members of a nuclear family (mother, father and children) communicate with each other to function as a social unit. The communication patterns in nuclear families vary. In some families social-cultural values are emphasized in communication patterns. For example children in such a socio-oriented family are not allowed to express their own opinions in front of their parents or elder relatives. They speak only when they are given permission and even then cannot express controversial or different opinions. Differences of opinions rarely if ever are encouraged in such families. In the pecking order of the family hierarchy members know their place and the boundaries of expressing their opinions. These type of families exist in every culture. However, in some societies socio-oriented families are in majority. If that is the case then social organizations of that society may also reflect socio-oriented communication patterns.

In contrast some nuclear families are idea-oriented. They believe that ideas and opinions of family members are instrumental in family interaction. Parents and children communicate freely and children express their views without fear of retribution. In fact children are encouraged to speak their minds and are listened to carefully by their parents. In a society where idea-oriented families make up the majority, social interaction is usually based on freely expressed opinions. The consensus in such a society comes

not with the pressure from the top but from participation of members of society in public debate. The idea-oriented families also exist in different cultures. If one considers a society as an intricate communication network then the communication behavior of the units (nuclear family) of this network influences the communication behavior of that society.

Describing the social structure in rural Pakistan, Tirmizi comments:

The dominant personalities normally have a group of core supporters from amongst their close kin, servants, and tenants. The other supporters come from diverse quarters and are not necessarily associated with each other. These supporters or "clients" form a group only from the perspective of the dominant personality or "patron" who can mobilize them as a group for his own purposes.²⁰

Tirmizi, then, reflects upon the influence of social structure on Pakistani bureaucracy:

However much the legalistic and formal nature of the state and its priorities may determine the workings of the bureaucracy, the structures of personal loyalty and particularism emerging from various institutional realms of society have a great influence on bureaucrats while interacting amongst themselves and the public that they deal with.²¹

The cybernetics science defines a formal organization such as an extension agency as:

[...any] large scale formal organization is a communication network. It is assumed that these communication networks can display learning and innovative behavior if they possess certain necessary

facilities (structure) and certain necessary rules of operation (content).²²

The organizational structure is not an abstract concept. As in the family communication patterns discussed above communication in organizations defines the nature of organizational structure. As Grunig explains:

To a large extent, the structure of an organization defines the problematic situation for individuals within the organization. It also determines the organization's flexibility and responsiveness to information inputs from the environment. Therefore, organizational structure will be conceptualized ... as the most important concept explaining why individuals in organizations and organizations themselves communicate.²³

And Grunig further states that structural characteristics can be defined as relationships between individuals rather than characteristics of individuals themselves.

The Stage One of this study consists of a communication audit conducted with the field, administrative and technical staff of Punjab's Department of Agriculture. The Stage Two is a follow-up survey with a selected group of farmers to determine their interaction patterns with their self-reported main source of information "other farmers." And finally the Stage Three consists of a series of free flow interviews with farmers, tenants and private sector representatives.

In Chapter II the methodology and rationale of the approach taken in this study will be discussed.

NOTES

1. Josette Murphy and Tim J. Marchant. Monitoring and Evaluation in Extension Agencies. World Bank Technical Paper Number 79, World Bank, 1988, p.4.
2. Oguz B. Nayman. "Seekers of Light" -- Information-Seeking Habits of Farmers: An Exploratory Survey, Punjab, Pakistan. USAID Report. 1988. p49, Table 22.
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CHAPTER 11

METHODOLOGY

ORGANIZATIONAL CHARACTERISTICS: STAGE ONE

1. What is it?

Communication audit helps to define the structural characteristics of an organization. As Grunig states:

- * Communication can be both functional and dysfunctional for the organization as a system.
- * The purpose of communication in an organization is to facilitate understanding among subsystems of the organization so that they can better coordinate their behaviors.
- * Perceptions of communication are colored by many variables other than actual communication (such as organizational constraints or job satisfaction). Thus variables that require employees to describe rather than evaluate organizational communication provide adequate means of evaluating the communication system.¹

It would be difficult to understand and explain the job satisfaction and communication behaviors of employees in an organization unless these variables were related to the structural characteristics of that organization. Therefore, in the organizational communication study variables utilized are related to organizational structure, communication behavior, communication satisfaction, job satisfaction as well as the demographic characteristics of employees of Punjab's Department of Agriculture.

2. Measuring Instrument.

The measuring instrument of the stage one was divided into three sections;

Section One

Part I : Demographic Background.

- a. Standard demographic items such as age, place of birth, length of stay in the place of birth, age, education, marital status, number of children, present position and posting, salary scale, length of government service, and residential and transportation accommodations provided by the government.
- b. Education and occupational status of respondents' parents, spouses, siblings and children. These items were incorporated into the Part I to determine the changes in education and occupational status in three generations among male and female members of the respondents' family.
- c. Land ownership and active involvement of respondents in farming.

Part II : Coorientation Items

In the Phase I of the Communication Management Studies farmers in the sample survey were asked questions about (a) adoption of recommended practices in wheat cultivation, (b) their active information-seeking activities on agricultural knowledge and practices and, (c) frequency of their use of official and non-official sources of agricultural information.

In my Phase I report I explained that coorientation is a communication process where communicating parties on a given subject would respond to each other through the mental pictures

developed in their minds. Communication attributes such as understanding and accuracy are the results of overlapping mental pictures of the environment between communicating parties.²

In Phase II of the Communication Management Study coorientation items were used to measure closeness in understanding and accuracy between farmers and agricultural officials. Officials were asked to estimate the adoption rate of recommended practices on wheat cultivation among farmers in their working area, farmers' information-seeking activities on agricultural knowledge and practices, and frequency of use of official and non-official sources of agricultural information by farmers.

The common sense logic behind this section of the questionnaire is that high frequency interaction between farmers and extension employees may contribute to better understanding and more accurate estimation by officials.

Section Two

Part I : Professional Development

a. In-service training:

The T&V System emphasizes the training of extension personnel to keep their knowledge current and to increase the efficiency of their teaching and liaison services. In this study the in-service training of the personnel of the Department of Agriculture was conceptualized separately from the routine training of the T&V System.

In-service training attended outside of the respondent's post such as workshops, short

courses, seminars and field training were recorded.

Respondents also evaluated the usefulness of in-service training for the performance of their jobs and indicated in what frequency they would like to attend in-service trainings.

b. Use of instructional/educational material:

Use, usefulness and comprehension of instructional/ educational material distributed by the Department.

c. Informal interaction of employees with co-workers and superiors to exchange information-knowledge on technical/professional aspects of their work.

Part II : Job Satisfaction

Seven questions measured employees' satisfaction with their jobs. Items included in this part were respondents' perceptions of occupational mobility in the Department, promotion procedures, salaries, human relations within the department, resource allocation to perform the job, daily working conditions and performance recognition. Four-point scale: Highly Disagree =1, Disagree =2, Agree =3 and Highly Agree =4, was used.³

Part III : Perception of Organizational Structure

Six items were used to measure employees perception of Organizational Structure:

Centralization: the extent to which decision making is concentrated at the top of the organizational hierarchy. The more an organization is centralized, the greater the constraints on employees outside top management and the less autonomy they have to make their own

decisions. The questions measured the perception of respondents on centralization in the organizations were:

- * Decision making is limited to top administrators
- * Independence (autonomy) in making decisions by the employees on the job

Stratification: the extent to which and organization makes it clear who are its higher-level employees and who are its lower-level employees. Stratified organizations limit interaction between employees at different ranks and make it difficult to move from lower to higher ranks.

The questions measured the perception of respondents on stratification in the organization were:

- * Clear and recognized differences between superiors and subordinates.
- * Difficulty of mobility (promotion) from lower to higher ranks.

Formalization-- the extent to which an organization follows rules and regulations. Generally, rules, charts, and procedures discourage innovation and autonomy in an organization, along with formalized innovation and autonomy in an organization, although formalized procedures have been found to increase employee satisfaction when they do not reduce autonomy because the procedures clarify what is expected of employees.

The questions measured the perception of respondents in the organization were:

- * Percentage of rules and procedures specified in writing (what to do and how to do it)
- * Degree of control (supervision) to make sure that employees operate according to rules and procedures specified by the department *

A three-point scale was utilized: (existence of this characteristic in the department I work for is) High =1, Medium =2, and Low =3.

Part IV: Problem Recognition - Constraint Recognition

To measure problem recognition-constraint recognition sixteen identical items were used.

Sixteen items can be divided into four subject areas: (1) Agricultural production issues at national, province and local levels, (2) Issues relating official-farmer interaction (3)

Agricultural research and technology issues, and (4) Management-employee relationships.

Problem recognition and constraint recognition are explained by Grunig as :

- * People generally do not stop to think and inquire about a situation unless they perceive that something is problematic about -- something is missing in--the situation. Problem recognition increases both information seeking and processing. People who recognize a problem seek information because they need it to understand the situation and to plan their behavior in the situation. People who recognize a problem are also likely to pay attention to--and thus--process information that comes to them

with little effort on their part.

- * Constraint recognition represents the extent to which people perceive that there are constraints--or obstacles--in a situation that limit their freedom to plan their own behavior. A high level constraint recognition lessens the likelihood that people will seek information about a situation or pay attention to and process information that comes to them randomly. Since organizational situation consists of a system of constraints, the situational theory predicts that employees are less likely to communicate in a highly structured organization than in less-structured organization because the constraints in the highly structured organization would discourage communication.⁵

A four-point scale was used to measure problem recognition: (I take time to think about these issues) Very Often =1, Quite Often =2, Sometimes =3, and Not at All =4. Constraint recognition was also measured with a four-point scale: (I think I can make) A Big Difference =1, Enough Difference =2, Some Difference =3, and No Difference =4.

Part V: Employee Perception of the Communication System
In Part V of the measuring instrument four aspects of communication patterns in the Department of Agriculture were studied:

1. Asymmetric communication where top level officials communicate to control the behaviors and attitudes of employees instead of creating an atmosphere of understanding (symmetric communication) to share decision making powers.

2. One-way, top-to-bottom vs two-way communication. Do the top level officials allow a room for feed-back from the sub-ordinates or do they dominate the channels of communication in a one-way pattern to transmit directives to their sub-ordinates?
3. Tolerance for negative communication. What is called entropy in information theory refers to the degrees of shuffledness (capacity to embrace errors and learn from them) in an organization. The American Heritage Dictionary describes the entropy as: "measure of the capacity of a system to undergo spontaneous change."⁶
4. Communication habits of the system--written vs oral communication, receiving enough information to perform the job, reporting adequately on the performance of the job.⁶

To measure the variables explained above 18 questions were used with a four-point scale: (This communication process takes place in my department) Very Often =1, Quite Often =2, Sometimes =3, Never =4.

3. Sample

A total of 81 employees of the Department of Agriculture, Punjab were included in the sample.

A stratified, purposive sampling method was employed. In accordance to their proportionate number in the Department of Agriculture 60 percent field and 40 percent office employees were included in the sample.

Shahkot and Haroonabad sub-systems of Command Water Management Project of Punjab were selected for the sampling of employees. These locations were selected because my

information-seeking survey with farmers was also conducted in these sub-projects in 1988.

4. Interviewing

A four-person team conducted the interviews. The pre-testing was implemented in Niazbeg sub-project. The interviews, on the average, took about three and one half hours per respondent. A half hour to an hour break was given to the respondents after two hour interviewing.

5. Editing and data Analysis

Interviews were edited daily. Computation of data was started during the first week of interviews. The data from the field was sent to computer personnel and entered into data bank. LOTUS program was used to analyze the data.

A STUDY OF FARMERS' AGENDA SETTING, FARMER ORGANIZATIONS, AND FARMING AS BUSINESS: STAGE TWO

1. What is it?

During the 1988 survey with farmers it was found that 91 percent of respondents reported "other farmers" as their main source of agricultural information. Personnel of line agencies served as limited sources of information.

The use of fellow farmers as sources of agricultural information is not a unique Pakistani rural phenomenon. For example Lionberger, in his studies with farm operators in a northeast Missouri community also found that farmers were using other farmers as sources of agricultural information. Lionberger states:

The search for information on person-to-person basis is a characteristic condition of rural life. When other sources of farm information are used with reluctance, the advice of friends and neighbors is often freely

sought. Persons who are more turned to as sources of information are naturally in a position to exercise greater influence and potential leadership in promoting technological change than others.⁹ (my emphasis)

Lionberger's study conducted at a location during a period that closely resembled the socio-economic conditions in present rural Pakistan. The northeast Missouri in 1953 was somewhat an isolated place with limited access to multiple information sources. In his previous studies at the same location Lionberger described the population of his studies as low-income and with low-level of education and limited physical mobility. These socio-economic characteristics might have contributed to farmers' dependence on their fellow farmers for information.

Coupled with high rate of illiteracy and limited access to audio-visual media the "other farmer" becomes a trusted source of agricultural information and agenda setting in farming population in rural Punjab. Thus the agenda setting becomes a process of interpersonal communication between family members and "fellow farmers."

In the follow-up survey conducted at the Phase II of Communication Management Studies the anatomy of agenda setting by farmers was studied.

In addition to evaluation of "other farmers" as a source of agricultural and agenda setting information, the follow-up study included components such as farmer's perception of agricultural organizations and farming as business and uses of instructional media prepared by extension agencies.

2. Measuring Instrument

The measuring instrument of the follow-up study was divided into three sections:

Section One

Part I: Bio-data and Agenda Setting in the Farm Family

- a. Standard demographic items including education and occupational backgrounds of three generations: parents, siblings, spouse and children.
- b. Agenda setting process in the nuclear farm family. Frequency of discussions with family members before a decision is made on matters related to farming.
- c. Involvement of extended family members, parents and relatives in the agenda setting process.
- d. Involvement of community members, neighbors, progressive farmers, fellow farmers on the watercourse, biradari farmers and contact farmer in agenda setting.
- e. Contribution of people outside of the community such as personnel of line agencies and private market representatives to decision making were investigated.
- f. Farmers in the sample also were asked to name three private market agents with whom they had frequent business relations.

Part II: Land Tenureship

- Re-check questions on land tenureship to determine the changes since the last survey in 1988.

Section Two

Part I : Interaction with 'Fellow Farmers'

Respondents were asked to name and rank order on the basis of frequency of contacts with three

farmers with whom they exchanged agricultural information. Based on this information the interaction patterns between respondents and the three fellow farmers they named as sources of agricultural information were investigated.

- a. Sociometric Analysis - relationships with sources: neighbors, close friends, biradari, old farmers who know the ways, progressive farmers who give useful information, educated farmers who get information easily, T & V contact farmer.
- b. Frequency of Information Gathering: How frequently respondent contacted his first, second and third source of information. Very often =1, Often =2, Often enough =3, Sometimes 4, Occasionally =5.
- c. Economic characteristics of the sources: The source's farm size is: Equal to my farm =1, Smaller than my farm =2, Larger than my farm =3, and A lot larger than my farm =4.
- d. Usefulness of the source's information: Very Useful =1 (I use the information and get good results), Useful Most of the Time =2, Useful Sometimes =3 (But I have to check with others to get more information).
- e. Accessibility of the Source: He is always ready and willing to give information =1, He is sometimes busy--it takes me time to talk to him for information =2, He is very busy--I seldom have a chance to talk to him =3.
- f. Reliability (Accuracy) of the Source: Always correct information =1, Most of the time correct information =2, sometimes not very correct information =3.

- g. Comprehension of information received from the source: Understands everything =1, Understands most of the things =2, Understands some of the things =3, Have difficulty understanding the things =4.
- h. Frequency of information-seeking from other sources in addition to fellow farmers: FA, AO, T&V Contact Farmer, Input Suppliers, and Private Market Store Owners: Always =1, Sometimes =2, Never =3.
- i. Usefulness ratings of the fellow farmers and others: Most Useful =1, Useful =2, Least Useful =3.
- j. Usefulness of the fellow farmers and other sources in particular areas of information seeking: Seed varieties, seed prices, availability of seeds in the market, fertilizer varieties, availability of fertilizers in the market, how to apply fertilizers, spray varieties, availability of sprays in the market, how to apply sprays to crops, marketing crops, and getting farms loan. Most useful source for me is: Fellow Farmers, T & V Contact Farmer, Field Assistant, Agricultural Officer, Input Suppliers, Private Market Store Owners. Rating: Most Useful =1, Least Useful =2.

3. Sampling

From the 1988 survey sample, 18 respondents from Niazbeg and 24 respondents from Shahkot Sub-projects of Command Water Management Project were selected on the basis of their land holdings and education.

4. Interviewing

Interviews took, on the average, one hour and twenty minutes to complete. A four-member team conducted the interviews.

5. Data Analysis

Same procedures used as in the case of officials' interviews to edit, code and analyzed the data. Open ended questions were analyzed by the author.

FREE FLOW INTERVIEWS BY FARMERS, OFFICIALS AND PRIVATE SECTOR REPRESENTATIVES: STAGE THREE

The author interviewed farmers, [REDACTED] and private business representatives on a free-flow context on issues ranging from farming as agribusiness to farmer-official relationships.

NOTES

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3. Oguz B. Nayman. "Seekers of Light-- Information Seeking Habits of Farmers: An Exploratory Survey, Punjab, Pakistan. USAID Report. 1988. pp.10-12.
4. Grunig. Ibid. pp.15.
5. Grunig. Ibid. p.25.
6. Grunig. Ibid. p.24.
7. The American Heritage Dictionary. Dell Publishing Co., Inc., New York, N.Y.:1986. p.237.
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CHAPTER III

DEMOGRAPHICS AND PROFESSIONAL DEVELOPMENT OF EMPLOYEES

A. DEMOGRAPHICS

The sample of the study consists of 81 employees of the department of Agriculture, Punjab. Out of 81 respondents, 49 or 60 percent were categorized as field staff (those employees who spent more than 50% of their working time in the field). And the remainder 32 or 40 percent were classified as office staff who spent more than 50% of their working time in office and/or research work. Stratification measures employed yielded close proportional resemblance of employee classification by the Department of Agriculture.

Table 1 includes classification and positions of employees interviewed.

TABLE 1
RESPONDENTS' PRESENT POSITION
N = 81

POSITION:		NUMBER IN THE SAMPLE	PERCENTAGE
<hr/>			
<u>FIELD STAFF</u>			
Field Assistant	(FA)	31	39
Farm Manager	(FM)	1	1
Agricultural Officer	(AO)	10	12
Water Management Specialist	(WMS)	5	6
Water Management Officer	(WMO)	1	1
Agricultural Inspector	(AI)	1	1
	TOTAL	<hr/> 49 <hr/>	<hr/> 60 <hr/>

Table 1 (Contd)

<u>OFFICE STAFF</u>			
Extra Assistant Director of Agriculture	(EADA)	9	11
Senior Subject Matter Specialist	(SSMS)	6	8
Deputy Director	(DDA)	5	6
Agricultural Officer (Training)	(AOT)	6	8
Agricultural Research Officer	(ARO)	6	7
TOTAL		32	40

In Table 2 data on employees age, birth place, and length of stay in their birth place are presented.

TABLE 2
RESPONDENTS' AGE, BIRTHPLACE AND
LENGTH OF STAY IN BIRTHPLACE

(N = 81)	
AGE	PERCENT
20 - 35	38
36 - 40	9
41 - 45	16
46 - 50	21
51 - 55	16

BIRTHPLACE	
RURAL	80
URBAN	20

<u>LENGTH OF STAY</u>	
<u>Years</u>	
1 - 5	6
6 - 10	5
11 - 15	25
16 - 20	26
21 +	38

More than three quarters (80%) of the employees of the Department of Agriculture come from rural background. Close to ninety percent spent their formative and/or early adult years in rural settings (88%). The data on employees birthplace and up-bringing are relevant in the sense that their work behavior may be related to their backgrounds. Employees' overwhelmingly rural origins and up-bringing could be considered as factors influencing their kinship loyalties and organizational communication behavior. Educational qualifications of respondents are shown in Table 3. Basically the level of education of the employees correlate closely to their rank and position in the organization.

TABLE 3
EDUCATION OF FIELD AND
OFFICE STAFF

EDUCATION	PERCENT
(N = 81)	
<u>FIELD</u> (N = 49)	
Master of Science	6
Bachelor of Science	12
One Year Diploma	23
Two Year Diploma	19
Diploma with additional qualifications	5
<u>OFFICE</u> (N = 32)	
Doctorate	1
Master of Science	26
Bachelor of Science	12

The gap in educational parity between men and women in Pakistan is closing in the families of government servants. In Table 4 the educational attainments of three generations of women and men are shown.

TABLE 4
EDUCATION OF RESPONDENTS' PARENTS,
SIBLINGS, SPOUSE AND CHILDREN

IMMEDIATE RELATIVES	(N = 81) (In Percentage)		EDUCATION
	NONE	YES	AVERAGE YEARS
Mother	85	15	6.92
Father	52	48	8.56
Sisters (n=125)	44	56	8.03
Brothers (n=184)	16	84	10.40
Wife (n=68)	31	69	8.70
Daughters	21	79	7.00
Sons	20	80	8.00

In three generations of women -- Mothers, Sisters and Spouses, and Daughters -- younger generations have in a fast pace attained more education than the generations preceding them. In the third generation (Daughters and Sons) the parity gap between men and women has almost disappeared. The pre-school children of employees are listed under "no education." Otherwise education among the children of government employees is universal.

The gap in education between the male generations is not as wide as in women's. However, progress between three generations of males in employees families (Fathers, Brothers, and Sons) is gradual. Second and third generation males are more educated than the first one. But the third generation's education is universal.

Social mobility of males from farming to non-farming occupations is rapid in the families of government servants (Please refer to Table 5). However, at least one third of

the first generation males (Fathers) come from non-farm occupational backgrounds. In the second generation (Brothers) males make a great leap forward in entering non-farm occupations (65%).

TABLE 5
OCCUPATION OF RESPONDENTS' PARENTS,
SIBLINGS AND SPOUSE

	(N = 81) (In Percentage)		
	OCCUPATION IN PERCENT		
	FARMING	HOUSEWIFE	OTHER
Mother	1	99	--
Father	69	--	31
Sisters (n=125)	--	86	14
Brothers (n=184)	35	--	65
Wife (n=68)	--	90	10

The occupational status of women, despite their educational attainment, does not show a progress. In two generations of women (Mothers, Sisters, and Spouses) housewifery is almost constant (99%, 86% and 90% respectively).

Employees of the Department of Agriculture still keep their ties to the land. Table 6 indicates that practically all of the field staff (92%) and about three fourths of the office staff presently own land (78%).

TABLE 6
LAND OWNERSHIP AND ACTIVE INVOLVEMENT
OF RESPONDENTS IN FARMING

(N = 81) (In Percentage)	
EMPLOYEES	OWNERSHIP
Overall	85
Field Staff	92
Office Staff	78

	INVOLVEMENT
When growing up	73
Presently	52

Due to their full time jobs only about half of the employees who own land are personally involved in farming (52%). However, those who still are involved in farming indicated that it helps them to understand the farmers' situation as well as keep them informed about the new agricultural practices.

The first indication of core's superiority over the peripheries is demonstrated in Table 7. In the Department of Agriculture there is a distinct difference between employee ranks and access to government provided housing and transportation. Higher the rank better the perks. However, field assistants stated that they can use government transportation provided to perform their duties, more effectively.

TABLE 7
ACCESS TO GOVERNMENT PROVIDED RESIDENCE
AND TRANSPORTATION BY RANK

(N = 81) (In Percentage)		
RANK	RESIDENCE	TRANSPORTATION
Field Assistant (N = 31)	32	13
Agricultural Officer(N = 10)	30	50
Office Staff (N = 32)	59	63

B. PROFESSIONAL DEVELOPMENT

As a routine T&V procedure the training of field and research staff is conducted regularly. In this study the training beyond the T&V process was investigated. The respondents were inquired about in-service training they attended during the length of their careers.

Almost all employees attended in-service training (Please refer to Table 8). However, office staff have an edge in number of in-service training courses attended over field personnel. Despite the fact that they have fewer courses attended the field staff seem to appreciate in-service training more than the office people. Both field and office personnel want more in-service training than offered presently (Please refer to Tables 9, and 10 respectively).

TABLE 8
ATTENDANCE TO IN-SERVICE TRAINING
BY FIELD AND OFFICE STAFF

(N = 81) (In Percentage)		
POSITION	ATTENDANCE	
	YES	NO
FIELD	90	10
OFFICE	97	3

	AVERAGE NUMBER OF TRAINING ATTENDED	
FIELD	2.40	
OFFICE	3.03	

TABLE 9
USEFULNESS RATING OF IN-SERVICE TRAINING
BY FIELD AND OFFICE STAFF

(N = 81) (In Percentage)					
POSITION	USEFULNESS				
	100%	75%	50%	25%	NOT USEFUL
FIELD	65	25	7	3	--
OFFICE	54	30	11	5	--

TABLE 10
 DESIRED FREQUENCY FOR IN-SERVICE TRAINING
 BY FIELD AND OFFICE STAFF

		(N = 81) (In Percentage)			
DESIRED FREQUENCY		KIND OF IN-SERVICE TRAINING			
		WORK SHOP	SHORT COURSE	SEMINAR	FIELD TRAINING
At least once a year	FIELD	43	58	26	23
	OFFICE	48	54	23	27
Once in every six months	FIELD	43	29	30	30
	OFFICE	44	32	38	30
Once in every three months	FIELD	14	7	40	14
	OFFICE	4	14	27	13
More Often	FIELD	--	6	4	33
	OFFICE	4	--	12	30

The field staff particularly emphasized the need for practical training in in-service courses. They desire to see and work with new technologies in a practical rather than theoretical manner. The courses that they liked were practically oriented. They believe practical training helps to show useful things to farmers.

According to respondents the reading material is out of date and arrived late. Employees complain about repetition of the subjects in the official reading materials. Also a high number of employees expressed the view that they do not have a current library within their reach. Particularly research staff complain about non-availability of scientific journals and other material (Tables 11 and 12).

TABLE 11
 READING AND EVALUATION OF
 INSTRUCTIONAL/EDUCATIONAL MATERIAL
 BY FIELD AND OFFICE STAFF

(N = 81) (In Percentage)					
POSITION	INSTRUCTIONAL/EDUCATIONAL MATERIAL				
	CIRCULARS	BULLETINS			OTHER
FIELD	--	--			--
OFFICE	--	--			--

USEFULNESS RATING	USEFUL				NOT
	25%	50%	75%	100%	USEFUL
FIELD	2	10	21	67	--
OFFICE	6	10	36	48	--

TABLE 12
 COMPREHENSION OF
 INSTRUCTIONAL/EDUCATIONAL MATERIAL
 BY FIELD AND OFFICE STAFF

(N = 81) (In Percentage)					
POSITION	COMPREHENSION				
	25%	50%	75%	100%	
FIELD	3	3	15	79	
OFFICE	--	--	7	93	

Another feature of the T&V program is the routine meetings for training and exchange of information between co-workers and superiors and subordinates. In tables 13 and 14 frequencies of informal meetings are displayed. Despite the explanations given by the interview team the officials still reported routine frequencies of T&V meetings. Nevertheless, the interaction, however routine, is taking place between co-workers and different ranks due to the requirements of the T&V system.

TABLE 13
 INFORMAL MEETINGS WITH CO-WORKERS TO
 EXCHANGE INFORMATION/KNOWLEDGE
 BY FIELD AND OFFICE STAFF

FREQUENCY OF MEETINGS	(N = 81) (In Percentage)	
	POSITION	
	FIELD	OFFICE
At least once in every two weeks	31	34
Every week	47	16
More frequently	8	6
Less frequently	14	44

TABLE 14
 INFORMAL MEETINGS WITH SUPERVISORS TO
 EXCHANGE INFORMATION/KNOWLEDGE
 BY FIELD AND OFFICE STAFF

FREQUENCY OF MEETINGS	(N = 81) (In Percentage)	
	POSITION	
	FIELD	OFFICE
At least once in every two weeks	34	39
Every week	43	18
More frequently	16	14
Less frequently	7	29

Employees of the Department of Agriculture come from achievement motivated rural families. The desire for the attainment of educational qualifications in the families of employees run through three generations. However, despite their apparent social mobility they still maintain their ties to the land. Almost half of the employees still

experience some aspects of rural life being involved in farming personally. Because of the close ties to their rural origins they probably maintain kinship loyalties and family traditions. It is plausible that these socio-cultural characteristics overlap with their organizational work behavior.

The present professional development opportunities seem short of expressed needs ^{of officials} to enhance intellectual and practical capabilities in performing their duties. All ranks want more seminars, short courses, and field training so that they can improve the services they render to their clients.

CHAPTER IV

ORGANIZATIONAL CHARACTERISTICS OF THE DEPARTMENT OF AGRICULTURE

***"We are treated like children
by our supervisors."***

A Respondent

A. INTRODUCTION

In the preceding chapters importance of facilitating in an organization to create harmonious relationships with its internal and external publics were discussed. Within this context communication behavior of an organization and its concomitant relations with the organizational structure were emphasized. It was stated that large scale formal organizations are communication networks and they can display learning and innovative behaviors if they possess necessary facilities (structure) and rules of operation (content).¹

As Grunig explains :

To a large extent, the structure of an organization defines the problematic situation for individuals within the organization. It also determines the organization's flexibility and responsiveness to information inputs from the environment. Therefore, organizational structure [is] the most important concept explaining why individuals in organizations and organizations communicate.²

It is my belief that existence of certain degrees of entropy (capacity to absorb change) is a necessary condition for those organizations involved in human progress. The lack of such an attribute in a developmental organization impedes its potential to relate its external publics in innovative ways.

The Department of Agriculture and its extension division can be considered as one of the nerve centers of agricultural development activities. Investigation of structural characteristics of the Department in the Phase II of Communication Management Studies was necessary to understand its internal communication behavior. The knowledge obtained can be used to enhance the Department's missions such as developing mutual agendas with farmer participation.

The following sections in this chapter will present aspects of organizational characteristics such as job satisfaction, perception of organizational structure by employees of the Department of Agriculture, problem recognition-constraint recognition by the employees, and organizational communication behavior in the Department.

The job satisfaction items provide an overall socio-climatic map of the organization: "How do the employees feel about their jobs within the operational atmosphere of the organization?" Job satisfaction is closely related to performance. In this study the focus on job satisfaction was necessary to understand the contours of the Department's socio-psychological climate.

The items on organizational structure measure the inter-relationship in the body politics within an organization. In the sections about the decision-making process its vertical-horizontal dimensions, established hierarchical order, process of upward mobility, and formalization of organizational functions were investigated.

The data on problem recognition and constraint recognition as perceived by the employees provide further insight to their awareness of problems and their perceived ability to tackle them.

John Dewey hypothesized that people in social organizations both think and inquire -- seek information --

when they recognize a problem. People do not generally stop to think and inquire about a situation unless they perceive that something problematic about -- something is missing -- in the situation. However, people generally shy away from those problematic situations if they think that they may not be able to overcome the obstacles. The solutions of some problems may be considered by the employees outside of the boundaries of their positional power within the department. A high level of constraint recognition may have consequences of withdrawal and low information-seeking by the members of an organization.³

Finally in this chapter findings on the organizational communication patterns in the Department of Agriculture will be presented.

B. JOB SATISFACTION

The data on employee's job satisfaction are included in Tables 15, 16 and 17.

Table 15 displays data on overall job satisfaction by the employees of the Department. A four-point scale: "highly disagree," "disagree," "agree," and "highly agree," was employed in the questionnaire. However, the cognitive distance between options of "highly disagree," and "agree" would not be significantly pronounced for the reasons of data analysis. Therefore on Tables 15, 16, and 17 the data were collapsed into two columns: "disagree," and "agree." The percentage bar charts and mean score analyses of job satisfaction items based on a four-point scale are also presented in Appendix A.

The employees of the Department are not up-beat about the opportunities for career advancement. Those who work on the field have more qualms about their career advancement than the office staff. The educational levels of field staff would put limitations on their advancement in ranks.

TABLE 15

JOB SATISFACTION
BY EMPLOYEES

JOB SATISFACTION ITEMS	(N = 81) (In Percentage)	
	DEGREES OF SATISFACTION* DISAGREE	AGREE
I think that I have a real chance to get ahead in my department	70	30
The best qualified people are usually chosen for promotion in the department I work for	60	40
I am satisfied with my pay and benefits	58	42
My department has a genuine concern for the welfare (working conditions, living conditions, etc.) of its employees	73	27
My department provides me with all the necessary resources (on-the-job training, educational support material, transportation etc.) that can assist me in doing my job well	43	57
I am satisfied with my day-to-day working conditions	23	77
I am satisfied with the recognition I receive for good performance in my job (promotions, honorarium, etc.)	54	46

(*) For the mean scores of four-point scale (Highly Disagree = 1, Disagree = 2, Agree = 3, Highly Agree = 4) please refer to Appendix A Table A-1

TABLE 16

JOB SATISFACTION
BY FIELD AND OFFICE STAFF

JOB SATISFACTION ITEMS	(N = 81) (In Percentage)			
	DEGREES OF SATISFACTION*			
	DISAGREE		AGREE	
	FIELD	OFFICE	FIELD	OFFICE
I think that I have a real chance to get ahead in my department	78	59	22	41
The best qualified people are usually chosen for promotion in the department I work for	63	56	37	44
I am satisfied with my pay and benefits	61	53	39	47
My department has a genuine concern for the welfare (working conditions, living conditions, etc.) of its employees	73	72	27	28
My department provides me with all the necessary resources (on-the-job training, educational support material, transportation etc.) that can assist me in doing my job well	45	41	55	59
I am satisfied with my day-to-day working conditions	20	28	80	72
I am satisfied with the recognition I receive for good performance in my job (promotions, honorarium, etc.)	59	47	41	53

(*) For the mean scores of four-point scale (Highly Disagree = 1, Disagree = 2, Agree = 3, Highly Agree = 4) please refer to Appendix A Table A-2

TABLE 17

JOB SATISFACTION
BY LENGTH OF SERVICE

JOB SATISFACTION ITEMS	(N = 81) (In Percentage)					
	DEGREES OF SATISFACTION* BY LENGTH OF SERVICE					
	9 & -		10-20		21 & +	
		years				
	D	A(**)	D	A	D	A
I think that I have a real chance to get ahead in my department	63	37	71	29	76	24
The best qualified people are usually chosen for promotion in the department I work for	44	56	59	41	73	27
I am satisfied with my pay and benefits	56	44	41	59	68	32
My department has a genuine concern for the welfare (working conditions, living conditions, etc.) of its employees	67	33	59	41	84	16
My department provides me with all the necessary resources (on-the-job training, educational support material, transportation etc.) that can assist me in doing my job well	44	56	47	53	40	60
I am satisfied with my day-to-day working conditions	26	74	23	77	22	78
I am satisfied with the recognition I receive for good performance in my job (promotions, honorarium, etc)	37	63	47	53	70	30

(*) For the mean scores of four-point scale (Highly Disagree = 1, Disagree = 2, Agree = 3, Highly Agree = 4) please refer to Appendix A Table A-3

(**) D = Disagree, A = Agree

Particularly field assistants will be bound to their positions unless they obtain higher degrees. Otherwise they remain at the lowest rung of the extension bureaucracy.

As the service in the Department spans further over the years employees become more aware of the difficulties in career advancement.

What is significant is that some of the office staff who have research and professional education backgrounds are not very positive about their career advancement opportunities either. About half of the office staff indicate their dissatisfaction with the career advancement potential in their jobs.

The consideration of merit, in addition to social connections in promotions is another factor in employee dissatisfaction. In open-ended discussions respondents claimed that the ones who can arrange "good connections" obtain promotions faster than the others. The levels of dissatisfactions between field and office staff with regards to promotion on merit are insignificant. But the length of service in the Department indeed takes its toll. Employees who served 21 years and above are bitter about missed opportunities in promotion due to "socio-oriented" nature of promotional process.

The pay benefits despite the constant struggle of salaried people to keep up with the rising living standards in a low income country such as Pakistan do not seem to bother the employees to a significant extent. One reason could be that the majority of employees own land and obtain food staples from their land to support their families. The usual trend of difference between field and office personnel is still in existence in the dissatisfaction with pay. But it is not as pronounced as in other areas of employee-management relations.

About three quarters of employees across the board are dissatisfied with the Department's handling of welfare of the personnel. As it was noted in Chapter III the perks go to higher ranks. However, according to findings of this study dissatisfaction over the Department's accommodation of amenities between office and field staff and/or different ranks are quite similar. But the older employees across the ranks again are the most dissatisfied.

Surprisingly the level of dissatisfaction drops significantly when the matter about Departmental support in necessary resources to perform the job is brought up. There is a discrepancy between the responses to items about personal welfare and resource support on the job. One explanation for the discrepancy can be that the item on "support in resources" might have activated a "socially desirable response" set. Because it includes the phrase "in doing my job well." The questionnaire apparently did not include clear enough measures between the job performance and departmental support to do the "job well".

Close to eighty percent of respondents across the board are satisfied with their day-to-day working conditions.

Recognition of good performance also is considered fair. The exception is the ones who served longer. They are bitter about not being recognized during their length of service in the department.

EMPLOYEES COMMENTS

FA:

"A good worker should be given honorarium."

FA:

"FAs should have at least an equal pay scale to those who teach agriculture in schools."

FA:

"I think in the Department there are enough chances for promotion. For example promotion of field assistant to agricultural assistant is a good procedure."

FA:

"If the Department wants its extension workers to create a green revolution then they must meet the following needs:

- a. Pay scales to be enhanced;
- b. Better chances for promotion;
- c. Welfare of employees' children to be considered;
- d. Better transportation to be provided.

Some incentives to the farmers should also be provided:

- a. Inputs (non-water supplies) to be supplied at Union Council level;
- b. Irrigation Water to be enhanced;
- c. Poor farmer be saved from the middle-man who is looting him;
- d. Farmers should get 10% more for their crops over the cost of production;
- e. Pesticides/weedicides should be sold through registered farm dealers at the presence of farmers -- fraud people are selling pesticides adulterated at higher levels."

AO:

"We are helpless. Flattery counts a lot in promotions."

AO:

"Promotion procedures should be streamlined and be strictly based on merit."

EADA TRAINING:

"This is a new set-up and I think chances for promotion are available in our area."

EADA:

"There should be no interference from local and other politicians into the process of promotion."

FARM MANAGER:

"I think in-service training should be mandatory for promotion. The Department should make necessary arrangements with universities and training centers to provide in-service training to the employees. The in-service training should be designed to fit the job requirements of the employees.

I like rigid type of discipline. Efficiency is important. However, those who work hard should be rewarded with honorariums or overtime payment."

C. PERCEPTION OF ORGANIZATIONAL STRUCTURE

In the Department of Agriculture the three areas of organizational structure, (a) centralization, (b) stratification, and (c) formalization were investigated.

In centralized organizations the decision-making power belongs to the core. In stratified organizations the top echelon make it sure that there is a hierarchical ladder in the organization and career mobility within the organization is closely controlled. And formalization -- creation of rules, regulations, charts and structural maps -- forces the members of the organization abide by the organizational norms of the structure.

The data in Tables 18, 19, and 20 present the perceptions of the employees on the structural characteristics of the Department. On a three point scale (High, Medium, Low) employees reported their perception of degrees of existence of structural characteristics within the Department. Tables 18 and 19 include percentage figures and Table 20 has mean score data. The percentage representation of the data in Table 20 is presented as a bar chart in Appendix A.

According to the employees, the Department of Agriculture is a highly centralized organization. As a consequence of this centralization the autonomy in making decisions by employees on the job is curtailed to a significant degree. Employees in the field and office categories have differences in perception on the centralization. The office staff being included in the decision making and a lot closer to the core of the organization than the field people think centralization is less severe (95% to 75% respectively). But in this survey the level of office staff reaches only the district tier (deputy director level). This tier is the third one from the top and can be partially considered as periphery. Therefore,

TABLE 18
PERCEPTION OF ORGANIZATIONAL STRUCTURE
BY EMPLOYEES

ORGANIZATIONAL STRUCTURE ITEMS	(N = 81) (In Percentage)		
	EMPLOYEES PERCEPTION OF ORGANIZATIONAL STRUCTURE		
	HIGH	MEDIUM	LOW
<u>CENTRALIZATION</u>			
Decision making is limited to top administrators.	89	10	1
Independence (Autonomy) in making decisions by the employees on the job.	12	29	59
<u>STRATIFICATION</u>			
Clear and recognized differences between superiors and subordinates.	57	33	10
Difficulty of mobility (promotion) from lower to higher ranks.	81	10	9
<u>FORMALIZATION</u>			
Percentage of rules and procedures specified in writing (what to do and how to do it).	44	40	16
Degree of control (supervision) to make sure that employees operate according to rules and procedures specified by the department.	42	44	14

TABLE 19
PERCEPTION OF ORGANIZATIONAL STRUCTURE
BY FIELD AND OFFICE STAFF

ORGANIZATIONAL STRUCTURE ITEMS	(N = 81) (In Percentage)					
	EMPLOYEES PERCEPTION OF ORGANIZATIONAL STRUCTURE					
	HIGH		MEDIUM		LOW	
	F	O(*)	F	O	F	O
<hr/>						
<u>CENTRALIZATION</u>						
Decision making is limited to top administrators.	98	75	2	22	--	3
Independence (Autonomy) in making decisions by the employees on the job.	11	12	24	38	65	50
<u>STRATIFICATION</u>						
Clear and recognized differences between superiors and subordinates.	65	44	31	37	4	19
Difficulty of mobility (promotion) from lower to higher ranks.	80	84	12	7	8	9
<u>FORMALIZATION</u>						
Percentage of rules and procedures specified in writing (what to do and how to do it).	53	32	33	50	14	18
Degree of control (supervision) to make sure that employees operate according to rules and procedures specified by the department.	49	31	39	53	12	16
<hr/>						
(*) F = Field, O = Office						
<hr/>						

TABLE 20
 MEAN SCORES OF
 PERCEPTION OF ORGANIZATIONAL STRUCTURE
 BY LENGTH OF SERVICE

ORGANIZATIONAL STRUCTURE ITEMS	(N = 81)		
	MEAN SCORES BY LENGTH OF SERVICE(*) (IN YEARS)		
	9 & -	10 - 20	21 & +
<hr style="border-top: 1px dashed black;"/>			
<u>CENTRALIZATION</u>			
Decision making is limited to top administrators.	1.03	1.23	1.13
Independence (Autonomy) in making decisions by the employees on the job.	2.42	2.52	2.48
<u>STRATIFICATION</u>			
Clear and recognized differences between superiors and subordinates.	1.55	1.88	1.35
Difficulty of mobility (promotion) from lower to higher ranks.	1.29	1.23	1.27
<u>FORMALIZATION</u>			
Percentage of rules and procedures specified in writing (what to do and how to do it).	1.51	1.94	1.75
Degree of control (supervision) to make sure that employees operate according to rules and procedures specified by the department.	1.59	1.94	1.70
<hr/>			
(*) Three point scale: High = 1, Medium = 2, Low = 3			

at least seventy five percent of the office staff still perceive that the core has the monopoly on making decisions.

Among the office staff there is about 19 percent of research personnel. In their work they feel that they are making decisions independently from the core. In free flow conversations some subject matter specialists and senior subject matter specialists expressed the opinion that in their laboratories and field research the core has very little influence on their decision-making. There is some room provided for the professional staff to make scientific decisions.

Stratification in the organization seem to be considered less severe than the monopoly on decision-making. As Fox states:

In a society where kinship is supremely important, loyalties to kin supersede all other loyalties, and for this reason alone kinship must be the enemy of bureaucracy... In developing countries bureaucratic rationality often loses out to kinship loyalties; an official selects his subordinate not on the criterion of ability to do the job, but on the basis of closeness of relationship. What to us is rank nepotism is to him a high moral duty.⁴

Commenting on the biradari relationships in Punjab Wakil explains:

The average Punjabi transports his biradari relationships almost intact to his work... The formal duties and regulations of the official and non-official institutions and organizations are frequently ignored or violated. The claims on personal biradari relationships, whether real or "synthetic", as mentioned above, supersede the observance of formal rules. The rules then are circumvented and result in

confusion and erratic or unpredictable functioning of the elements of the various social structure. The situation is often fluid and uncrystallized and means a severe blow to efficiency so desirable in the emerging bureaucracies.⁵

However, the influence of social norms on official and non-official organizations is not a unique Pakistani phenomenon. For example the Tokugawa Religion in Japan is considered one of the motor factors in the Japanese "miracle." According to the philosophical tenets of the Tokugawa Religion "familial piety" is the center of social activities. The business organizations utilize the philosophy to have their employees feel as if they belong to a "company family". The loyalty is reciprocal and the work is considered as a family concern.

The career mobility in the Department is perceived quite rigid by the employees. The stratification in the organization is kept rigid by not allowing flexible career mobility to the employees. The top echelons are selective in granting promotion to lower ranks. The core, before granting promotion wants to make it sure that the loyalty by the candidate is assured and he/she will conform by the de facto rules.

The Department of Agriculture does not seem to be a highly regulated one in terms of making rules and procedures specified. In some organizations highly specific rules and procedures help employees in guiding them in what to do and how. Some employees reported that at times they are confused by conflicting correspondence flowing from the core. At times rules set for the implementation of certain procedures would change before the work had begun. Therefore the staff at the peripheries often times are left in quandary on how to proceed on the implementations.

The length of service as a discriminating variable did not produce significant differences among the perceptions of employees on structural items.

The structural rigidity which seems to be entrenched in the Department can be considered one of the most significant gaps hindering the capacity of the system to embrace institutional innovations. In my interviews, most of the time, employees who are close to retirement expressed the view that without structural reforms the departmental capacity to serve will always be stunted due to the rigid distance between the core and the peripheries. It is my view that to meet the farmers' agenda the Department first has to acknowledge the importance of the inputs that can be made by the staff in the peripheries. To start sharing the decision making with the peripheries would further allow the Department to look seriously into the farmers' agenda for planning ahead.

EMPLOYEES' COMMENTS

FA:

"Officially we are not given any independence. But we know the system. We can operate within the system with some degree of independence."

FA:

"Field staff should be given a chance to report on crop diseases in the routine weekly meetings."

FA:

"In the policy making FA is completely ignored. However, he is the one who talks to the farmers directly. Just talking with and advising to farmers on a prepared package is not enough."

FA:

"In the presence of a superior even informal gatherings become formal. Subordinates are less vocal. Those who have a point of view on problems are careful to express it not to annoy the superior officer."

FA:

"FAs should be consulted on decisions made by the Department. For example last season the Department decided,

without consulting us, to implement an aerial spray on rice crops. It was useless. If we were consulted we would recommend that the spraying should be done a month before."

FA:

"I wish there was a congenial atmosphere in the Department. The experience and ideas of field workers would be paid attention to and listened to seriously. But presently officers do not want to hear our view points or utilize our experience. I believe this is the root cause of poor yields and misguided recommendations."

AO:

"Production plans should be the result of team work. The field staff should collaborate with policy makers in the preparation of production plans. Differences of opinion should be encouraged. Subordinate and his supervisor should develop an understanding for work. Some decisions which are situation specific should be taken after consultation with the concerned field staff."

EADA:

"The structure of the Department is set up in such a way that if I ask my subordinates to work harder I would sooner or later hear from my supervisors: "Don't pressure them too hard." Actually such a pressure comes from politicians. Those who are not good workers establish relationships with politicians. In this respect my influence to increase the efficiency of my subordinates is limited."

DD TRAINING:

"The temperament of the extension agent has changed. The temperament of the nation has changed. I'm talking about behavior change. When my colleagues and I were serving as AOs we travelled to villages on bicycles. Now an extension worker demands motorcycles. Even if they are given a motorcycle they still don't work. I don't know the reasons. But the quality of service went down. We are not consulted on the preparation of a production plan. Even the DD Extension is not consulted on this plan. Production plans are not problem-oriented they are self-made by the top people. Farmers should be consulted but they are not. Because the decisions in the production plans are made at top levels they are not related to realities of the field. Failure of the targets of these production plans are due to this kind of high-level, top-to-bottom planning. Politics are involved in this kind of preparations."

D. PROBLEM RECOGNITION - CONSTRAINT RECOGNITION BY EMPLOYEES

Table 21, 22 and 23 include data on problem recognition by the employees of the Department. Four areas of relevant issues were listed for the employees to express their concern: (1) Agricultural production matters, (2) Official-farmer interaction, (3) Issues related to agricultural research and technology, and, (4) Management/employee relations.

A four-point scale included options "very often," "quite often," "sometimes," and "not at all". For the purposes of analysis the data under the columns of "very often" and "quite often" were merged in percentage tables. A mean score analysis of the data based on four-point scale is presented in Appendix A, Table A-6.

Overall concern for the agriculture related issues is high among the employees. With the exception of national agricultural issues, sharing ideas with officers in similar jobs and policy decisions made by the Ministry of Agriculture, Punjab, employees report that they take time to think about agricultural issues. The issues concerning agriculture in Pakistan, exchanging ideas with employees in similar jobs in other parts of Punjab, and ministerial policy making are too broad for the employees actually to be concerned about. For example their financial means may not allow them to meet employees in other parts of Punjab, except maybe during in-service training. Employees do not have ample opportunities to meet others working for the Department throughout the Province. However, the idea is a useful one. Meeting people who work in similar jobs in other parts of the Province and the Nation would enhance employees' vision by the exchange of experience and information.

TABLE 21
PROBLEM RECOGNITION BY EMPLOYEES
ON 16 AGRICULTURAL ISSUES

(N = 81) (In Percentage)		PROBLEM RECOGNITION		
AGRICULTURAL ISSUES (DO YOU TAKE TIME TO THINK ABOUT?)	OFTEN/ OFTEN	SOME- TIMES	NOT AT ALL	
AGRICULTURAL PRODUCTION MATTERS				
Agricultural matters related to Pakistan.	57	33	10	
Agricultural matters related to Punjab.	72	23	5	
Agricultural matters related to your jurisdiction.	93	7	--	
Increase in agricultural production in Punjab.	82	16	2	
OFFICIAL-FARMER INTERACTION				
New ideas originating from local agricultural communities.	75	21	4	
How well your clients (Farmers) understand the services provided by your department.	89	11	--	
Farmer participation in making decisions in agricultural and water management.	78	21	1	
Being able to effectively communicate with farmers.	94	4	2	
ISSUES RELATED TO AGRICULTURAL RESEARCH AND TECHNOLOGY				
New ideas originating from agricultural research.	85	14	1	
New and improved agricultural technologies.	89	11	--	
MANAGEMENT/EMPLOYEE RELATIONS				
Making changes to do your job effectively.	90	10	--	
Management decisions that affect (influence) your job.	75	21	4	
Making a valuable achievement in your job.	89	7	4	
Working conditions in your job.	86	10	4	
Sharing ideas with officers in similar jobs as yours in other parts of Punjab.	65	23	12	
Policy decisions made by the Ministry of Agriculture/Punjab.	52	36	12	

TABLE 22
MEAN SCORES FOR
PROBLEM RECOGNITION BY FIELD AND OFFICE STAFF
ON 16 AGRICULTURAL ISSUES

(N = 81)		
AGRICULTURAL ISSUES (DO YOU TAKE TIME TO THINK ABOUT?)	MEAN SCORES FOR PROBLEM RECOGNITION*	
	FIELD	OFFICE
AGRICULTURAL PRODUCTION MATTERS		
Agricultural matters related to Pakistan.	2.55	1.90
Agricultural matters related to Punjab.	2.26	1.68
Agricultural matters related to your jurisdiction.	1.51	1.37
Increase in agricultural production in Punjab.	1.73	1.93
OFFICIAL-FARMER INTERACTION		
New ideas originating from local agricultural communities.	2.06	2.03
How well your clients (Farmers) understand the services provided by your department.	1.75	1.78
Farmer participation in making decisions in agricultural and water management.	1.95	2.03
Being able to effectively communicate with farmers.	1.44	1.75
ISSUES RELATED TO AGRICULTURAL RESEARCH AND TECHNOLOGY		
New ideas originating from agricultural research.	1.91	1.71
New and improved agricultural technologies.	1.67	1.62
MANAGEMENT/EMPLOYEE RELATIONS		
Making changes to do your job effectively.	1.57	1.59
Management decisions that affect (influence) your job.	1.81	2.12
Making a valuable achievement in your job.	1.61	1.56
Working conditions in your job.	1.83	1.71
Sharing ideas with officers in similar jobs as yours in other parts of Punjab.	2.34	2.21
Policy decisions made by the Ministry of Agriculture/Punjab.	2.55	2.28

(*) Four point scale used: Very Often= 1, Quite Often= 2, Sometimes= 3, Not at all= 4

TABLE 23
MEAN SCORES FOR
PROBLEM RECOGNITION BY LENGTH OF SERVICE
ON 16 AGRICULTURAL ISSUES

(N = 81)		MEAN SCORES FOR PROBLEM RECOGNITION*		
AGRICULTURAL ISSUES (DO YOU TAKE TIME TO THINK ABOUT?)	(IN YEARS)			
	9&-	10-20	21&+	
AGRICULTURAL PRODUCTION MATTERS				
Agricultural matters related to Pakistan.	2.25	2.11	2.40	
Agricultural matters related to Punjab.	2.03	1.94	2.08	
Agricultural matters related to your jurisdiction.	1.48	1.58	1.37	
Increase in agricultural production in Punjab.	1.85	2.00	1.70	
OFFICIAL-FARMER INTERACTION				
New ideas originating from local agricultural communities.	2.11	2.05	2.00	
How well your clients (Farmers) understand the services provided by your department.	1.55	1.88	1.86	
Farmer participation in making decisions in agricultural and water management.	1.85	2.00	2.08	
Being able to effectively communicate with farmers.	1.51	1.76	1.51	
ISSUES RELATED TO AGRICULTURAL RESEARCH AND TECHNOLOGY				
New ideas originating from agricultural research.	1.88	1.94	1.75	
New and improved agricultural technologies.	1.59	1.94	1.56	
MANAGEMENT/EMPLOYEE RELATIONS				
Making changes to do your job effectively.	1.59	1.94	1.56	
Management decisions that affect (influence) your job.	1.96	2.11	1.83	
Making a valuable achievement in your job.	1.51	1.01	1.59	
Working conditions in your job.	1.66	1.88	1.83	
Sharing ideas with officers in similar jobs as yours in other parts of Punjab.	2.33	2.05	2.37	
Policy decisions made by the Ministry of Agriculture/Punjab.	2.44	2.64	2.35	

(*) Four point scale used: Very Often= 1, Quite Often= 2, Sometimes= 3, Not at all= 4

The policy decisions made by the Ministry of Agriculture may concern the employees but for them the core seems so far away that they really do not have clear comprehension of what is going on at the ministerial tier. To many of the employees at the lower rungs of the peripheries the first tier of the Department may have seem like the heavens above.

The data shown in Table 22 indicates slight differences in the reactions of the employees of the issues listed. The percentage figures in Table 21 are high enough on most issues listed that mean score break-downs into positions and length of service in the Department do not show significant differences. All employees share similar concern on the issues listed with minute differences. A mean score analysis of the data in Table 24 based on four-point scale is presented in Appendix A, Table A-7.

The picture is almost reversed in Tables 24, 25, and 26. Employees of the Department in many areas of agricultural issues, feel incompetent in their minds that they can indeed make a difference.

More than three quarters of the employees in the sample indicate that they can make no difference on issues such as national and provincial agricultural matters, management decisions affecting their jobs, working conditions in their jobs and ministerial policy decisions. The attitude of employees in these areas can be considered logical because these issues are mostly outside of their immediate scope of work.

In the areas of official-farmer interaction employees perceptions are mixed. They believe they can effectively communicate with farmers but they feel somewhat reserved in their ability to make a difference about farmer participation in decisions in agricultural and water management issues. However as was stressed in this report,

TABLE 24
CONSTRAINT RECOGNITION BY EMPLOYEES
ON 16 AGRICULTURAL ISSUES

(N = 81)
(In Percentage)

16 AGRICULTURAL ISSUES (I THINK I CAN MAKE)	PROBLEM RECOGNITION		
	BIG/ENOUGH DIFFER- ENCE	SOME DIFFER- ENCE	NO DIFFER- ENCE

AGRICULTURAL PRODUCTION MATTERS			
Agricultural matters related to Pakistan.	4	9	87
Agricultural matters related to Punjab.	7	14	79
Agricultural matters related to your jurisdiction.	38	48	14
Increase in agricultural production in Punjab.	15	33	52
OFFICIAL-FARMER INTERACTION			
New ideas originating from local agricultural communities.	29	49	24
How well your clients (Farmers) understand the services provided by your department.	62	32	6
Farmer participation in making decisions in agricultural and water management.	30	24	46
Being able to effectively communicate with farmers.	83	13	4
ISSUES RELATED TO AGRICULTURAL RESEARCH AND TECHNOLOGY			
New ideas originating from agricultural research.	39	36	25
New and improved agricultural technologies.	33	46	21
MANAGEMENT/EMPLOYEE RELATIONS			
Making changes to do your job effectively.	67	22	11
Management decisions that affect (influence) your job.	5	12	83
Making a valuable achievement in your job.	74	17	9
Working conditions in your job.	6	21	73
Sharing ideas with officers in similar jobs as yours in other parts of Punjab.	30	36	34
Policy decisions made by the Ministry of Agriculture/Punjab.	--	7	93

TABLE 25
MEAN SCORES FOR
CONSTRAINT RECOGNITION BY FIELD AND OFFICE STAFF
ON 16 AGRICULTURAL ISSUES

AGRICULTURAL ISSUES (I THINK I CAN MAKE ..)	(N = 81)	
	MEAN SCORES FOR CONSTRAINT RECOGNITION*	
	FIELD	OFFICE
AGRICULTURAL PRODUCTION MATTERS		
Agricultural matters related to Pakistan.	3.95	3.64
Agricultural matters related to Punjab.	3.83	3.45
Agricultural matters related to your jurisdiction.	2.67	2.50
Increase in agricultural production in Punjab.	3.36	3.25
OFFICIAL-FARMER INTERACTION		
New ideas originating from local agricultural communities.	3.00	2.65
How well your clients (Farmers) understand the services provided by your department.	2.26	2.15
Farmer participation in making decisions in agricultural and water management.	3.06	3.12
Being able to effectively communicate with farmers.	1.69	2.06
ISSUES RELATED TO AGRICULTURAL RESEARCH AND TECHNOLOGY		
New ideas originating from agricultural research.	2.97	2.22
New and improved agricultural technologies.	2.93	2.59
MANAGEMENT/EMPLOYEE RELATIONS		
Making changes to do your job effectively.	2.18	2.21
Management decisions that affect (influence) your job.	3.93	3.53
Making a valuable achievement in your job.	1.97	2.12
Working conditions in your job.	3.85	3.28
Sharing ideas with officers in similar jobs as yours in other parts of Punjab.	2.97	2.86
Policy decisions made by the Ministry of Agriculture/Punjab.	3.97	3.86

(*) Four point scale used: Very Often= 1, Quite Often= 2, Sometimes= 3, Not at all= 4

TABLE 26
MEAN SCORES FOR
CONSTRAINT RECOGNITION BY LENGTH OF SERVICE
ON 16 AGRICULTURAL ISSUES

AGRICULTURAL ISSUES (I THINK I CAN MAKE..)	(N = 81)		
	MEAN SCORES FOR CONSTRAINT RECOGNITION*		
	(IN YEARS)		
	9&-	10-20	21&+
AGRICULTURAL PRODUCTION MATTERS			
Agricultural matters related to Pakistan.	3.77	3.88	3.85
Agricultural matters related to Punjab.	3.62	3.70	3.72
Agricultural matters related to your jurisdiction.	2.66	2.76	2.84
Increase in agricultural production in Punjab.	3.55	3.41	3.10
OFFICIAL-FARMER INTERACTION			
New ideas originating from local agricultural communities.	2.88	2.70	2.91
How well your clients (Farmers) understand the services provided by your department.	2.11	2.35	2.24
Farmer participation in making decisions in agricultural and water management.	3.14	2.87	3.13
Being able to effectively communicate with farmers.	1.92	2.05	1.66
ISSUES RELATED TO AGRICULTURAL RESEARCH AND TECHNOLOGY			
New ideas originating from agricultural research.	2.96	2.41	2.62
New and improved agricultural technologies.	2.96	2.76	2.70
MANAGEMENT/EMPLOYEE RELATIONS			
Making changes to do your job effectively.	2.51	2.05	2.02
Management decisions that affect (influence) your job.	3.81	3.82	3.72
Making a valuable achievement in your job.	2.25	2.00	1.89
Working conditions in your job.	3.51	3.76	3.64
Sharing ideas with officers in similar jobs as yours in other parts of Punjab.	3.12	2.76	2.88
Policy decisions made by the Ministry of Agriculture/Punjab.	3.95	3.88	3.94

(*) Four point scale used: Very Often= 1, Quite Often= 2, Sometimes= 3, Not at all= 4

the concept of effective communication with farmers should include participation of farmers in the agricultural-water management decision making process. There may be three factors influencing the reaction of employees to these two items:

1. The one-way communication orientation of the Department may have conditioned employees in such a manner that they may actually believe talking to farmers is effective enough communication. However, some comments made by employees do not support this assumption.
2. Even though they are basically people with rural origins and ties to the land, because of their education and official standing the employees consider themselves in a different class. The employees of the Department are now at the official side of the farmgate looking in. What they see at the other side of the gate does not convince them that people "over there" are capable of making decisions on "official" issues. They are the ones that stayed behind, uneducated, and incapable. They are now: "distant cousins." A longer discussion of this issue will be presented in the following chapters.
3. And finally, even though they may think (as was indicated elsewhere in this chapter) that it is necessary to include farmers in the decision making lower tier officials know that the Departmental attitude does not stress it and there is very little they can do to make changes.

The separation of officialdom from its clients in sharing decisions is quite pronounced in the employees responses to official-farmer interaction items. The set pattern of "us" and "them" seems to be an official motto. The bridges between farmers and officials have been blown during the colonial period when officials acted as the

agents of the colonial government. During the post-colonial era there have been attempts made to rebuild bridges by including agriculture in the developmental process. However the gap that exists cannot be closed unless the officialdom accepts the fact that farmers are indeed the producers of existing riches of the country and they are mature adults capable of decision making. In fact farmers are already making business decisions. But they, in their agenda, quite frequently, exclude the officials.

Still more lukewarm response to the items on agricultural research and technology by the officials. It is a consequence of the gap discussed above. Not exactly knowing what the needs of farmers are in the transfer of new technologies, officials feel helpless to tackle the problem. The one way communication does not provide realistic understanding of the needs of the farmers. And the modus operandi of the Department is to tell the farmers what they ought to do.

On management-employee relations the pattern is that of isolation of employees as individuals from the management. When asked about those areas where they individually can make changes they feel confident. However, when they have to deal with management to introduce changes the employees feel helpless. The response set to items under management/employee relations is a reflection of organizational structure in the Department of Agriculture. The people in the periphery are isolated from the core in communicating about issues related to their job and job conditions. In this area there is practically no difference between the feelings of the field and office staff.

EMPLOYEES' COMMENTS

FA:

"I think (making a difference) in terms of having some power so that I can make a change. If our pay scale and benefits were better we would be willing to work under any hardship and would try to make a difference. We think about the problems but are willing to do the minimum."

FA:

"Different pamphlets/recommendations are provided. But doses of pesticides in these recommendations do not coincide with each other. Different doses of the same fertilizer variety are recommended in different pamphlets. Farmers make fun of these contradictory recommendations. For example in the production plan on cotton it was recommended that 200-250 Mltrs of "DEISIS-D" should be applied to prevent "ball worms". We know from our experience that a higher dose "400 Mltr" is necessary to control this pest. When we brought up the matter in a meeting with DDA he ignored it. We say when a recommendation is prepared it should be subject to discussion by experts and field staff. After all views are presented then the recommendation should go into literature and fortnightly meetings."

AGRICULTURE

INSPECTOR:

"When something done wrong is pointed out to the supervisor he will be extremely annoyed and at once would snub the subordinate but where his own efficiency is adversely affected he will extent his cooperation to make it right."

AO:

"It is desirable to have autonomy on scheduling each weeks program of visits with farmers. There should be no interruptions from the top that higher officials want something else done and cancel all other commitments. Field Assistants should be allowed to write directly to the DDA about the problems requiring immediate action such as attack of a disease in his working area. Correspondence through proper channels takes a long time and delays fruitful action.

Some officers are not aware of the new practices or even of crops grown in their area... Better they consult the field staff."

E. PERCEPTION OF ORGANIZATIONAL COMMUNICATION BY EMPLOYEES

In Tables 27, 28, and 29 the data on organizational communication patterns are displayed. A mean score analysis of the data in Table 27 based on four-point scale is presented in Appendix A, Table A-8.

The data in Table 17, show that little over one half of the employees (56%) perceive that there is a asymmetric communication within the Department, but just under one half of the employees feel that symmetric communication also exists in the Department. However, when the variable is cross-tabulated with field and office positions the difference emerges. Most of the field staff think that communication between supervisors and subordinates is "sometimes" utilized to create an understanding. There is no difference between field and office staff in their perception of asymmetric communication. They have similar views on this issue.

The employees in the Department are close to a unanimous decision that communication flows in one direction: from the core to the peripheries. As a matter of conducting business there exists some communication from peripheries to the core, but again the field staff disagree (Table 28).

The four items discussed above have close correlation with the structural characteristics of the Department. The Department of Agriculture has a centralized and rigidly structured communication network.

The Department does not particularly encourage differences of opinion (Sometimes 52% and Never 26%), but employees can have differences of opinions with their immediate supervisors. Also employees can talk to their immediate supervisors when things go wrong.

TABLE 27
PERCEPTION OF ORGANIZATIONAL COMMUNICATION
BY EMPLOYEES

ORGANIZATIONAL COMMUNICATION ITEMS	(N = 81) (In Percentage)		
	EMPLOYEES PERCEPTION		
	VERY/QUITE OFTEN	SOMETIMES	NEVER
ASYMMETRIC vs SYMMETRIC COMMUNICATION			
Supervisors communicate to change the behavior of subordinates.	56	29	15
Supervisors communicate to establish an understanding with their subordinates.	48	47	5
ONE-WAY vs TWO-WAY COMMUNICATION			
Communication always flows from supervisors to subordinates.	95	4	1
Communication moves both ways.	26	57	17
TOLERANCE FOR NEGATIVE COMMUNICATION			
I can talk with my supervisor when things go wrong.	78	21	1
Department that I work for encourages differences of opinion.	22	52	26
My supervisor encourages differences of opinion.	48	33	19
INTER-RANK COMMUNICATION			
I am consulted about policy changes that involve my job before they occur.	17	16	67
I receive enough information from my department to do my job adequately.	63	36	1
I feel satisfied with communication with my supervisors about performance of my job.	84	16	--
My supervisor tells me what he thinks about my work.	54	37	9
I have a say in decisions that affect my job.	36	28	36
MECHANICS OF COMMUNICATION PROCESS			
I receive most instructions about my work in writing.	64	35	1
I receive most instructions about my work orally.	55	44	1

TABLE 28
PERCEPTION OF ORGANIZATIONAL COMMUNICATION
BY FIELD AND OFFICE STAFF

(N = 81)

ORGANIZATIONAL COMMUNICATION ITEMS	MEAN SCORES OF EMPLOYEES PERCEPTION	
	FIELD STAFF	OFFICE STAFF
ASYMMETRIC vs SYMMETRIC COMMUNICATION		
Supervisors communicate to change the behavior of subordinates.	2.32	2.37
Supervisors communicate to establish an understanding with their subordinates.	2.51	2.34
ONE-WAY vs TWO-WAY COMMUNICATION		
Communication always flows from supervisors to subordinates.	1.34	1.87
Communication moves both ways.	3.10	2.59
TOLERANCE FOR NEGATIVE COMMUNICATION		
I can talk with my supervisor when things go wrong.	2.10	1.40
Department that I work for encourages differences of opinion.	2.95	3.03
My supervisor encourages differences of opinion.	2.67	2.56
INTER-RANK COMMUNICATION		
I am consulted about policy changes that involve my job before they occur.	3.69	3.15
I receive enough information from my department to do my job adequately.	2.28	2.12
I feel satisfied with communication with my supervisors about performance of my job.	1.87	1.87
My supervisor tells me what he thinks about my work.	2.36	2.37
I have a say in decisions that affect (influence) my job.	3.22	2.50
MECHANICS OF COMMUNICATION PROCESS		
I receive most instructions about my work in writing.	2.22	2.15
I receive most instructions about my work orally.	2.28	2.28

Four-point scale used: Very Often= 1, Quite Often= 2, Sometimes =3, Never= 4

TABLE 29
PERCEPTION OF ORGANIZATIONAL COMMUNICATION
BY LENGTH OF SERVICE

ORGANIZATIONAL COMMUNICATION ITEMS	MEAN SCORES OF EMPLOYEES PERCEPTION (N = 81)		
	9 & -	10-20	20 & +
ASYMMETRIC vs SYMMETRIC COMMUNICATION			
Supervisors communicate to change the behavior of subordinates.	2.14	2.70	2.32
Supervisors communicate to establish an understanding with their subordinates.	2.44	2.52	2.40
ONE-WAY vs TWO-WAY COMMUNICATION			
Communication always flows from supervisors to subordinates.	1.62	1.70	1.43
Communication moves both ways.	2.77	2.76	3.05
TOLERANCE FOR NEGATIVE COMMUNICATION			
I can talk with my supervisor when things go wrong.	1.92	1.88	1.72
Department that I work for encourages differences of opinion.	3.11	2.88	2.94
My supervisor encourages differences of opinion.	2.51	2.64	2.70
INTER-RANK COMMUNICATION			
I am consulted about policy changes that involve my job before they occur.	3.51	3.29	3.54
I receive enough information from my department to do my job adequately.	2.37	2.17	2.13
I feel satisfied with communication with my supervisors about performance of my job.	1.88	1.94	1.83
My supervisor tells me what he thinks about my work.	2.48	2.41	2.27
I have a say in decisions that affect (influence) my job.	2.85	3.11	2.91
MECHANICS OF COMMUNICATION PROCESS			
I receive most instructions about my work in writing.	2.22	2.23	2.16
I receive most instructions about my work orally.	2.37	2.52	2.10

Four-point scale used: Very Often= 1, Quite Often= 2, Sometimes =3, Never= 4

Inter-rank communication seems satisfactory to the employees. An exception is the policy decisions. It is in those opinion oriented organizations where employees are asked to provide their inputs on the policy decisions. The Department is a socio-oriented organization (Please refer to comments in sections C and D by the employees). Decisions are made at the top and channeled to the peripheries through one-way communication.

And finally the communication mechanics in the Department are about evenly divided between written and oral communication patterns.

The data presented in this chapter have consistency. There is no erratic fluctuations and puzzling pieces of information. Like a mosaic every bit of information -- systematically collected with the participation of employees -- fits into the picture to create the profile of the Punjab's Department of Agriculture.

It is quite easy to be negative about the picture brought to light with the aid of the data. But developmental work is a positive one. It builds on positive attitudes. The work that is done in this study is for the building of institutional capacities not to destroy them with negativism. Being aware of what exists is the first step in the process of development.

NOTES

1. Mervyn L. Cadwallader. "The Cybernetic Analysis of Change," in Modern Theories. pp.158-164.
2. James E. Grunig. "A Multi-System Theory of Organizational Communication," Communication Research. 2 (April, 1975): III. p.102.
3. John Dewey (quoted in) James E. Grunig. "A Structural Reconceptualization of the Organizational Communication Audit, With Application to a State Department of Education," Paper presented to the Public Relations Interest Group, International Communication Association, Honolulu, Hawaii, May 24-27, 1985. p.25.
4. Robin Fox (quoted in) Parvez A. Wakil. "Exploration into the Kin-Networks of the Punjabi Society: A Preliminary Statement," Pakistan Sociological Writings. Punjab University Sociological Alumni Association, Volume I (1970), pp,5-16. (p.13).
5. Wakil. Ibid. p.13.

CHAPTER V

AGENDA SETTING BY FARMERS : A FOLLOW-UP STUDY ON INFORMATION-SEEKING

"I look at farming as a business. It is a very good business. It is supporting so many businesses in this country."

A Respondent

A. INTRODUCTION

In the 1988 survey to study farmers' information-seeking habits, it was necessary to depart from traditional conception of farmer and farming. It was suggested that the occupation of farming should no longer be considered as a calling, a way of life based on long-established folkways.¹

The rapid urbanization in low income countries has left a nostalgic feeling among the newly urbanized city dwellers about their backgrounds. Fantasizing about the country side as a bucolic setting away from the relentless pace of the cities the urban folks yearn for the "easy-going" agricultural life in the villages where rustic scenes serve as a backdrop. By some urbanites farming is considered a calling, a tradition handed down from one generation to another for the continuation of rural life. I wonder.

The following is an excerpt from a conversation I had with a farmer recently^(*) :

NAYMAN :Let's talk about market prices now.

Mr. ALI^()** :Sure. I'm into vegetables . If I put Rs. 100 in vegetables I can get a return of Rs. 1000. I make close to fifteen thousand Rupees a year from my farming. My input cost is less than my market gains.

NAYMAN :What about traditional crops such as wheat? Some farmers tell me that their production costs exceeds their market gains.

Mr. ALI :No. Not in my case. I get 35 mounds per acre. I know how to use DAP and Urea. I make a profit from wheat.

NAYMAN :Is it because you know what you are doing?

Mr. ALI :Yes. Because I know there is a profit to be made in farming. And I'm trying very hard to get that profit.

NAYMAN :In the beginning of our conversation you told me that you were a progressive farmer. I always wanted to know what does it take to be a progressive farmer? Some folks say that those farmers who are educated and have large landholdings are usually called progressive farmers. You are not educated. You don't have a big land. What do you think makes you a progressive farmer?

Mr. ALI :I look at farming as a business. It is a very good business. It is supporting so many other businesses in this country. Those farmers who complain about their incomes are not full-time farmers. They don't have their hearts in farming. They usually get their income from other jobs around here. But for me this is a profit making

(*) I'm indebted to my colleague and friend Mr. M. Zaman for his excellent translation of my conversations with farmers and officials. Without his extraordinary bi-lingual skills and vast background in matters related to agriculture I would be lost in my studies in the countryside.

(**) The name of the respondent was changed to abide by the rules of confidentiality.

business. Even when I plant wheat I can still make a good profit. I don't understand why they can't make a profit from farming. Land-lease prices are high around here. But many people are trying to lease land. If farming was not a profit making business why should these people go after land?

Mr. Ali's views on farming as a profit making business may not be the dominant theme among the Punjabi farmers. But he is not a minority of one either. Those farmers who consider agriculture not a profit making endeavour would readily state that their opinion is based on the constraints they face in conducting their businesses. The natural calamities beyond their control, shortage of irrigation water, the non-availability of inputs when needed, and most importantly very limited financial resources available to them to utilize the new technologies are frequently reported handicaps curtailing farmers' profit making. Further these farmers would report that working with an urban-centered and non-profit minded bureaucratic cadre stunts their potential in preparing their agenda for profit making.

The conflict between the urbanized agenda setters and rurals is not a new phenomenon. During the colonial era it was the clash between the agendas of the industrialized nations and agrarian ones. In the post-colonial period the conflict now appears to be between urban and rural sectors of low income countries. Eager to industrialize fast and bent on utilizing the agricultural output as a basic asset urban agenda setters design targets for agricultural production. These production targets are often times over ambitious and mostly devoid of the realities of the rural sector. The resources available for the agricultural operators either ignored or overestimated. To increase his profit is a lifetime goal of a farmer. But how? This is the gap between urban and rural agenda setters: to come into realistic terms in mutual agenda setting.

In the next sections the process of farmers' agenda setting and views of farmers and the Department of Agriculture employees on different aspects of agribusiness in Pakistan will be presented.

B. THE DEMOGRAPHIC BACKGROUND OF THE SAMPLE

The tables 31, and 32 present figures which are in stark contrast with the demographic backgrounds of the officials. Education among the three generations of males and females of farming families stay low. Particularly females have very limited progress in education in farming communities.

TABLE 30
AGE

(N = 42)	
AGE	PERCENTAGE
20 - 35	12
36 - 40	2
41 - 45	5
46 - 50	20
51 - 55	16
55 - 60	5
60 +	40

TABLE 31
EDUCATION

(N = 42)	
	PERCENTAGE
NONE	56
1 - 5	44

TABLE 32
 EDUCATION OF RESPONDENTS' PARENTS,
 SIBLINGS, SPOUSE AND CHILDREN

IMMEDIATE RELATIVES	EDUCATION		
	PERCENT		AVERAGE YEARS
	NONE	YES	
Mother	100	--	--
Father	83	17	6.57
Sisters (n=71)	93	7	5.00
Brothers (n=71)	52	48	10.44
Wife (n=42)	88	12	5.00
Daughters (n=88)	57	43	4.76
Sons (n=128)	12	88	8.62

Farming is the dominant male occupation and women stay as housewives in consequent generations. Only one third of the brothers have non-farm occupations (Please refer to Table 33).

TABLE 33
 OCCUPATION OF RESPONDENTS' PARENTS,
 SIBLINGS AND SPOUSE

		OCCUPATION IN PERCENTAGE		
		FARMING	HOUSEWIFE	OTHER
Mother	(n=30)	3	97	--
Father	(n=30)	97	--	3
Sisters	(n=69)	--	100	--
Brothers	(n=69)	65	--	35
Wife	(n=39)	--	100	--

Taking purposive sampling procedures into consideration it is still plausible to state that there exists a distinct contrast between officials' and farmers' backgrounds. Officials, majority of them, also come from rural sector. But their families are upwardly mobil. More of their sisters, brothers, and fathers are educated. More people from officials' families have left the farming for non-farm jobs. And their children are universally educated. In the third generation of the officials families ties to rural sector would slowly start disappearing. The third generation in officials families will be basically urban dwellers with non-farm occupations.

The contrast between employees' and farmers' families underlines the importance of Schultz comments on investing in human capital.

C. FARMERS' INTERACTION WITH OTHERS FOR AGENDA SETTING

The 1988 survey has provided us with the clues on farmers' agenda setting activities. The recognition of constraints by the farmers led them into heavy information-seeking to find the ways in implementing their agendas.² In the present follow-up survey the agenda setting activities of farmers were investigated in more detail. The picture that emerges indicate farmers' careful and deliberate acts of information-seeking to set their agenda.

The nuclear family is the core of the agenda setting. Farmers consult their sons and wives in making decisions related to farm matters. As shown in Table 34 the sons are heavily involved in agenda setting. The male child of a farmer is his partner but not equal. He works in the field with his father and is considered the one who most likely would take the business after his father's demise. Thus the heavy reliance on the male child in decision making.

TABLE 34
 FARMERS' INTERACTION WITH
 IMMEDIATE FAMILY MEMBERS
 ON FARM DECISION MAKING

IMMEDIATE FAMILY MEMBERS	(N = 42) In Percentage FREQUENCY OF INTERACTION				
	ALWAYS	OFTEN	SOMETIMES	NEVER	N.A.
Wife	19	31	31	17	2
Sons	40	21	7	14	17
Daughters	5	2	7	64	22

The wife in reality shares a heavy burden at home and in the fields. But somehow she is an outsider to the family. She does not belong to the blood lines. She is a strong second to the male child as a source of information-exchange on the setting up the family agenda. And the daughters are practically excluded from the decision-making in the nuclear family. They are the guests waiting their time to join another family.

To an outsider this process may seem somewhat unfair. But considering the realities of the rural life in Pakistan the process is pragmatic and logical. It has a very business oriented approach. Those members of the nuclear family who are primarily responsible in carrying out the business transactions are given more power in the agenda setting of the business than others.

The living elders of the family (the fathers and mothers) are also consulted. But most probably out of respect rather than for business decisions. They are supposed to give their blessings.

The relatives such as uncles, cousins, nephews consulted were so small in numbers that they were not included in the table.

The data presented in Table 35 still underlines business-like approach of farmers' agenda setting. It is calculated and unemotional.

The next important person who is consulted on agenda setting is the fellow farmer on the watercourse. Not the biradari farmer but the one that shares his mutual concern daily: fellow farmer on the watercourse. Because the watercourse is the business place. Whatever happens to a farmer in business matters happens on the watercourse. Fellow farmers on the watercourse are a conglomerate of business executives. Their businesses are tied together through the field channels and they intimately know who is doing what and how in the business. They observe, ask and listen to each other. They exchange information knowing well that it is for the purposes of business.

TABLE 35
FARMERS' INTERACTION WITH
OTHER FARMERS ON
FARM DECISION MAKING

OTHER FARMERS	(N = 42) In Percentage				
	ALWAYS	OFTEN	SOMETIMES	NEVER	N.A.*
Fellow Farmers in the village	29	45	21	2	3
Progressive Farmers	14	40	7	19	20
Fellow Farmers on the watercourse	36	50	12	2	--
Biradari Farmers	26	48	12	7	7
T&V Contact Farmer	7	12	2	17	62

* Not applicable. Respondents did not indicate any progressive farmer. And T&V System was not in operation in some of the watercourses studied.

The fellow farmer on the watercourse may be a member of the biradari. But a farmer first recognizes him as a business associate on the watercourse.

As shown in Table 36, field assistant and private market people, however nominally, also considered in the decision-making process.

TABLE 36
FARMERS' INTERACTION WITH
NON-VILLAGE PEOPLE ON
FARM DECISION MAKING

NON-VILLAGE PEOPLE	(N = 42) In Percentage				
	ALWAYS	OFTEN	SOMETIMES	NEVER	N.A. (*)
FA	5	14	40	38	3
AO	--	2	17	79	2
OFWMO(**)	--	43	26	26	5
MCO	--	2	10	86	2
Input suppliers	--	7	62	26	5
Private market Store Owners	--	7	19	69	5

(*) No Answer

(**) Spurious relationship due to watercourse lining.

The home and the watercourse are primary and secondary epicenters in farmers' agenda setting activities. However, farmers roam around to gather information to make sure that agendas set are based on realistic expectations. They are ever concerned to avoid risks and to make pragmatic decisions to increase their profit margin.

D. FARMERS' INFORMATION GATHERING FOR AGENDA SETTING

Farmers in the sample were asked to name three fellow farmers with whom they exchanged information frequently. Respondents also rated them in terms of their importance as information sources.

Table 37 shows the sociometric relationship between information-seekers and their frequently used sources.

TABLE 37
FREQUENTLY USED SOURCES
FOR DECISION MAKING

SOCIOMETRIC CHARACTERISTICS	(N = 42) In Percentage		
	FIRST	SECOND	SOURCES THIRD
Neighbor	74	52	48
Close Friend	60	55	50
Biradari	76	86	71
Old Farmer who knows ways	36	21	14
Progressive Farmer	57	24	14
Educated Farmer	33	17	14
Other	14	14	12

(*) Multiple Answers

In Table 38 calculation of cumulative responses indicate that the biradari farmers are the most frequently used sources of information.

The contact with biradari is an obligatory one. Farmers may or may not agree with their biradaris on a variety of issues but the ties are binding and emotional. Then there is the support received from the biradari in hard times. This kind of ties make the biradari an indispensable source of information and advice.

Neighbors and close friends follow the biradari. But the progressive farmer is given enough importance to show that farmers indeed go after information they think can be useful. In fact the educated farmer is also given a rather important place in the pecking order of information gathering.

TABLE 38
FARMERS INTERACTION
CUMULATIVE RESPONSE

(N = (42x3)) (In Percentage)	
SOURCE	RESPONSE (n)
Biradari	78% (98)
Neighbor	58% (73)
Close Friend	55% (69)
Progressive Farmer	32% (40)
Old Farmer	24% (32)
Educated Farmer	21% (27)
Others	13% (17)

The Table 39 indicates the obvious. But closeness of relationship between farmers in information gathering is underlined by the fact that they see each other almost every day. The outsiders can never achieve such a close relationship with farmers.

TABLE 39

FREQUENCY OF FARMERS'
INTERACTION WITH THEIR
SOURCES

(N = 42) In Percentage			
FREQUENCY OF INTERACTION	FIRST	SOURCES SECOND	THIRD
Very Often (Almost everyday)	76	55	31
Often (At least once a week)	14	29	36
Often enough (Once in every two weeks)	5	2	14
Sometimes (Once a month)	2	7	2
Occasionally (Whenever I see him)	2	--	2

Farmers have a networking process in collecting and disseminating information. The Table 40 shows that they prefer those fellow farmers either with larger or smaller land holdings than theirs for source of information.

TABLE 40
 LAND-TENURE STATUS OF
 RESPONDENTS IN COMPARISON
 TO THEIR SOURCES

(N = 42) In Percentage			
LAND TENURE STATUS (*)	FIRST	SOURCES SECOND	THIRD
Equal to my farm size	17	12	5
Smaller than my farm size	33	38	38
Larger than my farm size	43	38	33
A lot larger than my farm size	7	5	10

(*) Median land holding of farmers
 in the sample = 11.5 acres

There are two strategies involved in this process. The large land owners are preferred because most of the time they are the ones to experiment with new varieties of seeds or new agricultural practices. During the trial period farmers closely observe the results of experimentation. If it works then they replicate, in small plots, the experiment learned from large land holders.

On the other hand the small land holder is observed for his efficiency and achievement within the constraints he operates. The successes and failures of smaller land holders are more critical to observers than the large land holders. Because consequences of failure for the large land holders may not provide an example from which they can learn lessons. But failure of small farmers is very close to home.

It gives the farmer much more realistic examples of the causes of failure. There is more to learn from the smaller land holders in agenda setting than the big land lords.

There is also a networking process taking place in the information-seeking. The large farmers, land usually serves as an experimental laboratory. The experimental results are carried from the big out to medium and smaller farms. In this respect the smaller farmer being the last to experiment has the benefit of previous trial and error results and therefore are watched more closely than the others.

The time lag that interferes in this networking process is large enough that sometimes the innovations adopted do not actually help bring the progress hoped for. Because by the time the small land holder is experimenting with a new seed the large farmer is ahead of him trying another Hi-brid variety.

The usefulness ratings of information received from the fellow farmers are displayed in Table 41. The judgments of the farmers seem to be very reserved. Farmers do not believe that every bit of information they receive from their fellow farmer is useful. Because they always cross-check information received with other sources. This is one of the most critical findings of the present study. In the 1988 survey it was found that 91% of the farmers depended on fellow farmers for information in agricultural matters. However, we now know that the fellow farmer serves as the first source of information most of the time. But the information the fellow farmer provides may or may not be useful. It needs to be verified and cross checked. And the farmers in the sample are indicating that this is what they do. In matters of business their trust in fellow farmers is subject to verification.

TABLE 41

FARMERS' PERCEPTION OF
USEFULNESS OF AGRICULTURAL
INFORMATION RECEIVED FROM
THEIR SOURCES

(N = 42)			
In Percentage			
PERCEIVED DEGREES OF USEFULNESS	FIRST	SOURCES SECOND	THIRD
Very useful (I use information and get good results)	57	33	26
Useful most of the time	40	52	55
Useful sometimes (But I have to check with others to get more information)	2	5	5

Accessibility of the source of information does not pose a problem for the information-seekers. The fellow farmers are accessible most of the time (90% the first source, 86% the second source and 71% the third source respectively). Accessibility of the source is important for the farmer. In the previous study most farmers complained about extension staff for not being easily accessible. They do compare the accessibility of extension staff with their fellow farmers' easy availability for consultations.

The accuracy of information received from fellow farmers is rated fairly high. However, accurate information may not be useful all the time (Please refer to Table 42).

Farmers distinguish between the accurate and useful information. Their reliable sources may be providing them with fairly accurate information but farmers may not be able to use the information received most of the time. The information that flows randomly between information-seekers

and their sources are put to test for their usefulness. The agenda setting requires that information received has to be checked with those who have decision making powers. The question asked is: "What good would this bit of information bring to us and our business?" The gate-keepers sort the information received. This evaluation process is the essence of information gathering and processing.

TABLE 42
FARMERS' PERCEPTION OF
RELIABILITY OF AGRICULTURAL
INFORMATION PROVIDED BY
THEIR SOURCES

RELIABILITY (ACCURACY) OF INFORMATION	(N = 42) In Percentage		
	FIRST	SECOND	THIRD
Always correct information	74	52	38
Most of the time correct information	24	36	43
Sometimes not very correct information	2	2	5

Despite their usual claim to the contrary farmers use other sources of information including the extension staff. Table 43 indicates that farmers prefer multiple sources of information in agenda setting. The cumulative response categories show that the private market representatives are the second most frequently used sources of information after fellow farmers. The field assistant and agricultural officer also are used frequently because farmers still want to maintain contact with the Department of Agriculture. The T&V System which is in operation in most of the sub-systems of Command Water Management Project also has changed the

picture from the 1988 survey. There is more frequent contact between farmers and extension staff now. This is a good opportunity to be seized by the Department to start establishing mutual agendas with farmers.

TABLE 43
OTHER SOURCES OF
INFORMATION USED BY FARMERS

SOURCE	(N = 42) (In Percentage)		CUMULATIVE RESPONSE (n) MEAN*
Field Assistant	79%	(33)	2.09
Agricultural Officer	76%	(32)	2.78
T&V Contact Farmer	45%	(19)	2.21
Input Supplier	81%	(34)	2.09
Private Market Store Owner	62%	(26)	2.42
Others	5%	(2)	1.00

* Four point scale used for mean: Very Often= 1, Quite Often= 2, Sometimes= 3, Never= 4

And finally the data on comparison of usefulness of fellow farmers in agenda setting are displayed in Table 44.

The fellow farmer tops the list. He is indispensable because farmers share their concerns and plans with fellow farmers to set their agendas. The experience shared has the elements of understanding and accuracy. The communication with fellow farmers makes sense because the mental pictures about the environment are overlapping in their minds³. Almost everyday conversations put information-seekers and their sources in a state of communication that long explanations or clarifications are not necessary anymore. Like longtime friends or husband and wife teams communication between farmers has become a habit, an

extension of their minds into the realm of the world around them. The coorientation with fellow farmers in communication is real and consistent.

The private market people (in combination) are second valued sources of information. The extension is the third useful source utilized by farmers. The results here reciprocate the findings of the 1988 survey. This follow-up survey has validated the data collected in 1988⁴.

TABLE 44
COMPARISON OF USEFULNESS OF
INFORMATION SOURCES BY FARMERS

(N = 42)
(In Percentage)

SOURCE	CUMULATIVE RESPONSE (n)	MEAN*
Fellow Farmer	95% (40)	1.30
Field Assistant	67% (28)	1.93
Input Supplier	67% (28)	1.86
Private Market		
Store Owner	40% (17)	1.29
T&V Contact Farmer	31% (13)	1.77
Agricultural Officer	24% (10)	2.00

* Three point scale used for mean: Most Useful= 1, Useful= 2, Least Useful= 3

A break-down of usefulness of the sources on specific agricultural information items is presented in Table 45. The selectivity of sources in information-seeking by farmers is quite evident by the data displayed. The fellow farmers again rank high in terms of usefulness as an information source. But as indicated above the farmers always cross-check the information received from fellow farmers with other appropriate sources. And in Table 45 below the calculated approach to information-seeking by farmers is graphically displayed. It is by no means a haphazard, random approach. It has a very logical, pragmatic and consistent pattern.

TABLE 45
FARMERS' PERCEPTION OF USEFULNESS OF SOURCES
ON VARIOUS AGRICULTURAL INFORMATION ITEMS

Information Items	(N = 42)							
	In Percentage							
	Ranking of Usefulness of Sources							
	FF	CF	T&V FA	AO	IS	PMO	Other (**)	N.A. (*)
Seed Varieties	60	2	24	--	--	--	10	4
Seed Prices	45	--	2	2	38	2	5	6
Availability of Seeds in the market	50	2	5	--	31	5	2	5
Fertilizer Varieties for your crops	48	2	24	--	14	--	7	5
Fertilizer prices	31	--	--	--	62	--	2	5
Availability of Fertilizers in the market	31	--	2	--	60	--	2	5
How to apply fertilizer to your crop	42	2	33	--	5	--	10	8
Spray varieties (pesticides, weedicides etc.)	29	2	19	--	24	--	10	16
Availability of Sprays in the market	24	--	2	--	55	--	2	17
How to apply sprays to your crops	26	--	29	--	19	--	10	16
Marketing your crops	33	--	--	--	2	12	21	32
Farm Loans (How to get them)	26	--	--	--	--	--	17	57

FF = Fellow Farmers, T&V CF = Contact Farmer, FA = Field Assistant, AO = Agricultural Officer, IS = Input Supplier, PMO = Private Market Store Owner.

(*) No Answer

(**) "Agricultural Hour" on the radio.

E. SELECTED COMMENTS FROM OFFICIALS AND FARMERS ON BUSINESS ASPECT OF FARMING

OFFICIALS

FA:

"Farmer is not a businessman. May God wish that our farmer start thinking like a businessman. The green revolution will only be possible if we start thinking farmer as a businessman and farming as agribusiness."

FA:

"Farmers keep in their minds expenditures they make on inputs and sale prices. They make comparisons. They know every season how much profit they made and how to prepare for the next season."

FA:

"Today farming has become a business. But it is a pity that the Government is not recognizing farming as a business. We can increase our yields and uplift our farmers if government recognizes farming as a business."

FA:

"I don't think farming is a business. Farmer has limited scope in doing his business. His land is fixed and his water resources are limited. If he thinks that wheat is not producing good profit he cannot easily shift to oilseeds. He is too afraid of changing his ways."

SSMS:

"Most farmers have small land holdings. When they are under financial pressure they will sell the land. They have no storage facilities to wait for the price increases. They cannot be considered businessmen."

WMS:

"Farmers are at the mercy of God. They cannot be businessmen."

EADA:

"Farmer is not a businessman because he cannot foresee his losses. He does not go for alternate crops."

SSMS:

"When we consider overall Pakistani farmer is not a businessman. Majority of farmers have small lands. They are subsistence farmers living hand to mouth."

SSMS:

"Farming is business. You buy inputs and sell products. The farmer is a manager. He thinks in terms of business. But very few people know this. If we accept farming as a business there can be a lot of changes in Pakistan. If we start farming in business terms then we would be calculating what we have invested and what we've received in return. This approach would change a lot of things in Pakistan."

DDA:

"Small farmers can also be innovators. They try in small scale. But their resources do allow them to be considered as businessmen. In business there is bankruptcy. No such a thing in farming. Farmer will still be in his village. Some of the farmers are business-minded and some are agriculturists. For agriculturists farming is a calling, a way of life."

DDA:

"Our farmer is not a businessman. I consider scientific farming as business. Proper accounting of expenses and incomes should be recorded. Our farmer does not have this ability. farmers in our country doing practices and buying inputs without any record. If farmers keep record then they will know not to overdose/underdose fertilizer. They will know exactly what to do. He will be then considered a businessman."

FARMERS:

"Big land holding makes farming a business. I'm a very small farmer. I own one acre. I cannot say anything about business matters. I never use fertilizer and pesticide. I use farm manure and sow fodder for my buffalo and goat."

"I have only two acres. How can small farmers claim themselves as businessmen. We just live hand to mouth."

"Farming deals with plants. Natural conditions cannot be predicted. Profit and losses cannot be calculated."

"Yes. It is a profession which provides food and fibre to the fellow countrymen."

"I purchase inputs and sell products like a businessman."

"If a farmer does not think in business terms he cannot survive."

"The more the input, the greater the knowledge, the more the production."

"It involves money!"

"I maintain accounts. If I think that fertilizer and spray help me to get more produce I apply more. Sure I am a businessman."

"Farmers constantly observe the inputs because they want more and more production. Farmers want to raise their standard of living."

NOTES

1. Oguz B. Nayman. "Seekers of Light" -- Information-Seeking Habits of Farmers: An Exploratory Survey, Punjab, Pakistan, USAID Report, 1988. pp.7-8.
2. Nayman. Ibid. Please refer to Table 27 on page 54.
3. Nayman. Ibid. p.9.
4. Nayman. Ibid. p.56. Table 29.

CHAPTER VI

LISTENING TO PEOPLE: VIEWS OF ZAMINDARS, TENANTS AND PRIVATE MARKET REPRESENTATIVES ON AGRICULTURAL ISSUES

*"Estragon: Let's go.
Vladimir: We can't.
Estragon: Why not?
Vladimir: We're waiting for Godot.
Estragon: Ah! "*
Waiting for Godot
ACT I
Samuel Beckett

*"Allah will solve our problems."
Mr. Haleem
A Respondent*

The big land holders preferred to talk in large blocks. The small land holders and the tenants responded in little chunks. The input suppliers wanted to be interviewed.

I. Zamindars

Mr. Ahmad is a large landholder. He is also an activist in community affairs. Mr. Ahmad lives in a pukka house, has servants and drives a jeep.

On his background and information-seeking:

Regarding farming I discuss with my brother and my uncle. I consult them always but I never consult my wife. Always discuss with sons and never with daughters.

Our domestic life is such that my wife manages household jobs and she has no farming experience. I am

maintaining servants and they are looking after the milch cattle. My wife supervises these servants to take care of the cattle. Nothing more than that.

My wife also supervises the labor picking cotton and chilies.

My father is dead and my mother is living. I often consult my mother for farming. Besides my family I also discuss with my servants, fellow-farmers and ask the other farmer when they are sowing and what are the results with the new varieties. How much fertilizer they are putting, about sprays and yields etc.

In addition I also consult the Agriculture Department, field assistant, agriculture officer, EADA, water management officer. In my village we have two cooperative societies and we are given loans for seed and tractors. We also have two private companies for fertilizer and pesticides.

Close to my village there is a foreign expert who has taken some land on lease called TSA farm. I go to him for information also. I consult the botanist and other scientists from the Agriculture University in Faisalabad. They came here to establish experimental plots in my farm.

I own about 120 acres on this watercourse which are irrigated by canal and tubewell water. In addition to this I have 50 acres on lease. I sow 65 acres of crops and 105 acres of fodder in each season. Fodder provides me with more return than wheat or rice.

On market prices:

Our government fixes the input rates and does not consult us. We cannot even cover the cost of production. The price of the produce is also fixed by the government. When we grow wheat the government gives us Rs. 80/- per maund. The government imports wheat from outside at a rate of Rs.177 per maund. Because of this reason I have to grow

fodder instead of wheat. I fix my own price in the market for fodder. So the government is giving us stepmother treatment. For fodder there is no rate fixed by the government and we can go to the open market.

For rice and wheat I have to apply fertilizer and arrange labor for nursery transplanting, harvesting and threshing. In the market there is the middle man. He fixes the rate. For fodder I do not need pesticide I need only one bag of fertilizer per acre. In fodder I have 3 to 4 cuttings. So I earn a lot and I made it my policy that when the government is not looking after the farmer let the government import at higher rate.

Small farmers have also a side business. The small farmer is selling fodder and keeping buffaloes. He sells the milk at Lahore and gets good money. So every farmer big or small is planning to produce those crops which are profitable and he can control the price.

On farming as a business:

There is no way that the government will recognize a farmer-oriented program. It would not happen. Tax on fertilizer goes from the farmer's pocket. The tax that mill owner pays goes from the farmer. Tax that WAPDA pays goes from the farmer. Actually the tax payee is the farmer but the recognition goes to the industries. The government should not help the industries exclusively but should also recognize farmer. Because farmer is producing the raw material that industries are utilizing. Farmer is paying for transport of raw material. Government charges Rs.15/- per trolley as market fee. The farmer also has to pay octroi etc. I think if government cannot do anything for farmer at least, it should lift the control of fixing the market prices.

Farming is a business. We realize how much we invest and how much we will get. If it does not give us much profit we will not care but will do some other business. The business point of view is that we have to buy fertilizer at government fixed rate, use electricity at government rates, bribing of officials and other problems we face. I know if I invest more in fertilizer I will get more production. We have business risks which can be due to bad weather, diseases etc.

If I have enough money and know that my land requires more inputs I will do it. If I do not have money I must look for a loan for which I have to pay 12% interest. I have to calculate if I can repay that amount with interest. We have other problems such as supply of irrigation water. The water is allocated to us at rates fixed in 1911 and it is not enough for our present requirement for irrigation. Although we have met these requirements through illegal means such as bribing officers or stealing to get enough water. An example is the Lahore canal which is passing through areas which were irrigated previously but now have been urbanized. So there is a lot of spare water which is sold by the department. The government should meet the genuine demands of farmers so that there would be no stealing.

The bureaucrat is the backbone of the country who is also a government official. I do not blame bureaucrats and I do not blame farmer or government. The situation is that our political representatives take bribes. So when we bribe a bureaucrat they ask him why you are taking bribes. Unless the government realizes the importance of the poor farmer and asks them about their problems and manage programs according to requirement of the farmers nothing better can be done. So the government should formulate its policies and programs in consultation with the farmers and not listen to those politicians who are looking after their own interest.

On farmers profit orientation:

If farmers are motivated on the theory of profit making then they will unite.

Farmer is already motivated in terms of profit on what to grow for profit. We are already motivated but take the example of Arelan or some other pesticide. Now some agencies and suppliers adulterate the quality of the pesticide whereas I have made an investment. The cheating by the suppliers/middle man who want to get rich over-night destroys our business.

This time one of my friends bought two bags of fertilizer at the rate of Rs. 250/- each. I met him on the way and checked the quality of his fertilizer and found that it was fake and adulterated.

The government does not plan properly the requirement of fertilizer, therefore, farmers are the ones who are suffering and also the adulterator has a chance to sell fake fertilizer and make huge profits.

Mr. Abdul is 34 years old, has a matric degree (10 years) and owns 30 acres of land . He is the numbardar of his village, lives in a pukka house and owns a car. Mr. Abdul's name was given as a source of agricultural information by several farmers in his village.

On information exchange and agenda setting:

Most of the time I get my information from Mr. Basheer. He owns about 100 acres of land and is a progressive farmer. Mr. Basheer has close contact with extension personnel. But I think he does not solely depend on local extension people. He goes to extension headquarters in Lahore and talks to experts there. He is a retired army officer. He has big landlords among his friends and exchanges information with them frequently.

The reason I depend on Mr. Basheer for agricultural information is that he always tries new seed varieties first. Mr. Basheer is generous in sharing his experiences with me and other farmers. We have the advantage of seeing the results of his experiments. If a new seed variety is successful we see it for ourselves at the harvest time. The yield and other things. Then my farmer friends and I try the new variety to test it by ourselves. So I get reliable information from Mr. Basheer because the information I receive from him is actually tested in his farm.

Mr. Basheer is like an elder brother to me. Whenever I visit him at his home we talk about farming. Farmer to farmer talk.

I also give information to other farmers. But it takes two to three years before a new seed variety is tested by most of the farmers in the village.

In this village only two farmers own land about 25 acres. The other farmers own smaller lands. The small farmers have to work as laborers because their land cannot

support them fully. But they are still interested in high yield varieties, so we always share information on farming.

The new variety seeds are available in limited quantity. They are expensive and require scientific knowledge to use. Extension people are not helping us much in this respect. I very seldom see an extension person by myself. We have to spend time to go and find them if we need information. Therefore we share information among ourselves. But the majority of farmers do not know which fertilizer to apply before sowing. For example they are applying DAP with second or third irrigation instead of sowing time. They do the same with Urea. They are farming on a routine basis not on scientific ways. The reason, I believe is that the extension people are not helping farmers. The farmers need training and they are not getting it.

I am quite sure that small farmers will adopt new techniques if they receive help from the extension. If I have 10 Kg. seed I will utilize it for my own farm. I cannot afford to share it with other farmers. Sometimes they have to wait three to four years before a new seed variety is tested by Mr. Basheer and a few other farmers like myself. This is not good. Extension should help everybody to learn about the new varieties and how to use them properly. This is not done.

On other line agencies:

The Mobile Credit Officer never comes to this village.

The On-Farm Water Management (OFWM) people often visit me. Because I am the Numbardar, I frequently see them. The OFWM personnel used to come to the village even before the improvement of the watercourse. They used to come and tell us to install nakkas and to straighten our watercourse. The lining of the watercourse started after three years of OFWM people's arrival. We had our watercourse improved two years

ago. Now the OFWM people come to the village less frequently.

Our tertiary system has yet to be lined. So we go and visit OFWM offices frequently to get the lining done.

Before the watercourse improvement I used to sow 14 acres in Kharif but now I do 16 acres. There is a definite advantage of the lining of watercourses. But in the last two years there is less water in the canal. In my estimate the discharge is reduced by twenty percent in the last two years.

Before lining of the canal we were supplied water for 1200 acres of land. The supply now is for 900 acres. Originally this canal was designed to irrigate 900 acres. But with the passage of time we started demanding more water for our gardens. The Department of Irrigation tried to meet our demands and gradually increased the water supply to irrigate 1200 acres. But after lining the canal they reduced it to the original design of 900 acres. They also changed the position of the mogha in the canal. Before the canal lining the mogha was lower than it is now. They raised the mogha so that less water is being discharged into the watercourses. If we bribe the irrigation Department we can get the level of the mogha lowered. But we would bribe the man now and he would be transferred to somewhere else. The new man will come and raise the mogha again. Then we have to bribe him.

On Water Users Associations (WUA) and other farmer organizations:

Actually there is no difference between the biradari and Water Users Associations (WUA). Same people who belong to the biradari also are members of WUAs.

The head of our biradari was chosen as the chairman of our WUA. Similarly a man who was good in accounting elected

as treasurer. The influentials in the biradari are also influentials in the WUA.

I think a federation of WUAs would be useful. Say we improved our watercourse this year. If there was a federation the experience we gained from the improvement of our watercourse would be helpful to other WUAs. We would be able to tell them what to do and how to do it.

Also there are few persons who are very good in accomplishing things but they belong to different WUAs. So if there is a federation, these efficient people will be able to help each other and everybody will benefit. Otherwise we always struggle separately by ourselves.

Our watercourses passes three villages. We had a meeting and elected people on their efficiency and influence in getting things done. The federation would help us to achieve our goal more efficiently.

The farmer organizations should be formed by the government. The reason I am saying this is that if farmers organize by themselves there will be no support from the government. We will go nowhere with our organizations. It is better that the government takes the responsibility to organize so that they can help us. If they organize then it becomes their liability and the government then has to do something.

We can organize our own associations. But we have the experience that even if we organize on certain issues we have no say before the government. Even we organize by ourselves the end result is that we have no say before the government.

On business aspects of farming:

The business is only business when there is some profit. Since there is no profit in farming, agriculture is not a business.

The prices of inputs are so high that they do not match the price we get for our products. When we get any production it is being sold just to meet the expenses that we have incurred.

The standard of living of the farmers is below even the subsistence level. Although farmers are not begging, their economic position is just like beggars. Nobody has a good house. Nobody has facilities for a better standard of living.

Government should reduce the input prices. The prices of inputs should be fixed in accordance with the cost of production. In fact, it is better that the government should let the market rates be floating free. But if the government insists on fixing the prices of farm outputs then there should be consideration given to the cost of production so that farmer may have a reasonable margin for profit.

Farmers cannot put the pressure on the government to ask for higher market prices. A farmer is not in a position to hold on to his produce long enough. He commits himself to the middle man on loans and has to sell his produce to pay his loans. He cannot delay in selling his produce.

We tried to exert some pressure last year. We decided not to supply the sugar mill with sugarcane. But some farmers who previously could not sell their sugarcane to the mills came into the picture. The mill owners approached these farmers and bought the sugarcane from them. So our plans to demand higher price for our crop failed.

The government is well aware that farmer is not getting his fair share in the market but nevertheless the price policy will not be changed. Because 100 maunds of sugarcane makes 8 maunds of sugar. Government is earning two and one half Rupees per kilogram from sugar by taxing the sugar

industry. So the government supports the sugar mills. If the farmers are supported there will be less revenue earned by the government.

We may be able to get support if there was unity among the farmers. We can have a union and our representatives can talk with the government people. But the mental horizon of farmers is not yet wide enough to initiate such an activity. It will take time for farmers to realize things and organize a union.

Farmers now are becoming more and more aware of things. Things will change faster now than it was possible a few years ago.

Mr. Haleem is married and has four children. He owns 175 acres of land. He has a law degree and worked as an advocate before his retirement in 1978. He is a semi-retired farmer. His brother oversees his lands. He lives in a large pucca house. He has two sons and two daughters. All his children have more than a high school education. He consults his sons but not his wife or daughters on agenda setting. He and his brother manage their farms together but are not partners. He speaks fluent english.

On the agenda setting and information exchange:

In our family system women do not go out in the fields. They have to look after the children and household affairs. They are not involved in farming so we do not discuss with them.

In Punjab most of the people are not observing purdah but we came to Pakistan from India where we observed purdah. The women do not go out, they live within the household. They do not go out in the fields at all.

I don't go to other farmers for information but they come to me. One of our relatives is an Agricultural Officer. We can consult him. Sometimes when the extension staff has to lay out a demonstration plot they come to our farm. We do not go to them but they come to us.

The water management people always used to come when the canal lining was in progress but now the work is done and they come rarely. We do not get any loan so we don't meet any Mobile Credit Officer. We only go to the input supplier to purchase pesticide and fertilizer. When we want to get any information we ask our nephew who is in the Agriculture Department.

I own 125 acres on this watercourse and 50 acres at another place. We sow nearly 75 acres during Kharif under canal and tubewell water. During Rabi we sow about 100

acres. Out of the 50 acres in the other village we sow 35 acres in Kharif and 40 acres during Rabi. The other land is irrigated with tubewell water. I have tenants who also ask me on agricultural information. In addition to my tenants, few farmers also come to me to see what pesticide and how much fertilizer we are applying because they know that our nephew is an Agricultural Officer.

If I had less land, farmers would not come to me. The people who come to me are neighbors, friends, but not biradari.

There is no other farmer who has land more than I at this watercourse. Farmers come to me very frequently for advice. The information I give to other farmers is very useful and they act upon it.

When I give advice to small farmers I tell them that it may be a risk for them since I have large holding and can bear some loss but they cannot. Then these farmers tell me that they will see if it's successful on my land, and then they will adopt it on their farms.

The small farmers are sowing their farm according to traditional ways i.e. they sow 1 - 2 acres of wheat some acre of cotton, a little sugarcane etc. So they are not going to take a big risk with new crops such as sunflower. The small farmer has a fixed pattern.

The tradition in this country is that people sow conventional crops which their forefathers have been sowing. They don't want to change the trend. There are some crops which are called cash crops which fetch more money than other crops. So only those people who are interested in cash crops bother about getting information from experienced people. The others who are traditional farmers only come to me to learn how to increase the yield of wheat.

In our country the yield is about 20 maunds per acre. When a farmer thinks that he should have more yield then he

goes to an experienced person to ask him what you have been doing to get 40 Maunds per acre. So this is the information they generally ask.

They do not ask how to get better types of crops because wheat is the basic crop which farmers grow most of the time. A farmer of 4 - 5 acres will not try to copy the big farmer who is sowing crops like sunflower or cotton and vegetables. They will not bother about it. They will sow 2 - 3 acres of wheat then some cotton in Kharif or some fodder for their animals.

On market prices:

Government is doing nothing for these small farmers. The cost of input has gone very high and out of reach of the small farmers. This is why they are not getting better crops. We asked the government many times to reduce the price of fertilizer. If not that then at least to give us the proper price for our commodities. In our country the price of wheat was fixed at Rs. 80/- per maund. Now they have made it Rs. 96/- per maund. In response to a question on smuggling wheat to neighboring countries our Federal Minister of Agriculture replied to the press: "Wheat in Iran is selling at the rate of Rs. 23/- per kg. and in India Rs. 15/- per kg. and in Afghanistan it is also Rs. 25/- per kg. But here in our country it is only Rs 2.50 per kg. So when the farmers do not get proper prices for their crops they sell it at a better price."

People are not getting enough profit from farming as they should be. This is why our country is not self sufficient in any thing except cotton. Government can do many things, government should actually realize that the farmers must get the benefit of their labor.

On farming as business:

Definitely, recognizing farming as a business is the only way which can make farmers work more pleasantly otherwise they will wither.

The average yield of cotton in our country is 20 maunds according to Government statistics. What we spend on growing cotton is more than the return on 20 Maunds in the market. So we do not really get what we put in. So if we spend Rs.200/- for a field and the price we get for our crop is Rs. 180/-, we are in a loss. We are in debt of Rs.20/-

In the industrial countries the industry is the main source of income. But in our country where there is mainly agriculture, industry is being set up without a reference to the people living in the countryside. Industrialists in our country have very big cars, big bungalows, and lead a very luxurious life. But the farmers, like my brother who has five square of land, cannot afford to have a car. Whereas the value of his land is more than the cost of a common factory. The man who owns a factory leads a luxurious life but the farmer leads a very, very poor life. Why is this difference? Why should he not get the exchange of his labor? There is a great gap.

We produce all these things which are very necessary for life. When we take them to the market, we would not be able to obtain the price which we have spent. We would not say that we will give you this banana for Rs. 2/-. People will come and say will you take two annas or will you take two and one half annas. We will have to sell it for that price although we produced it for Rs. 2/-.

The mill owner who produces cloth will put all his interest, insurance, profit and everything and will bring it to the market and fix his price himself. He will say I will sell it at this price. He will always be in profit.

The government should think on the grounds that every human being in this country should live at a better standard of life. Everybody should be given the reward of their labor and expenses. This is the only thing that these poor cultivators want in this country.

On Farmer as a businessman:

Farmer has never been a businessman. But now big landlords are becoming businessmen.

Farmer is a manager in my thinking. The farmer is a manager and a worker. A farmer with 10 acres of land cannot pay for labor. He works himself and he deposes his sons and family as workers. But on the other hand he is also the manager of his farm.

If government recognizes farming as business it will be a great change. Then we will have an elected body who will discuss all the matters with the government to give us our returns. Right now there is no recognition of the farmer block.

I have heard that in America the government says to the farmer that we will need such quantity of wheat. Then the farmer say that we will give you this wheat but on such price. But in Pakistan we put in hard work and the rate will be marketed according to our government. The government should agree with farmer's association, that at what price different items will be bought by the government.

The bureaucracy always works according to government policy and law. The bureaucrats will cooperate with farmer because many of them are from this class i.e. rural and farmer.

I do not think if we change the rules that the bureaucracy will be a hinderance to this. Our bureaucrats are not the managers.

The rich farmers are very cruel people in our country. This is why the country is ruined. Educated farmers would be able to lead the people.

If farmers are educated then they can form their own organization, but in our country the ratio of education is only 17% and that is mainly due to city population. In the village the ratio is not more than 4 to 5 percent. So when the people are uneducated and they know nothing, they cannot form any union.

Allah will solve our problems. I do not think under the circumstances we are passing through these days, anybody will be able to solve our problems.

Mr. Beg is 55 years old. He consults his wife regarding how much area should be planted. Since the money is with his wife, when he has to purchase fertilizer he also consults her. Because his wife is the custodian of the seeds he consults her on seeds too. They plan everything together. Mr. Beg's sons are working outside the village. He has five years of education. Mr. Beg owns 3 acres of land. He lives in a katcha house.

Q - Mr. Beg would you talk to biradari neighbor first or a watercourse neighbor first when you want to consult someone?

A - I consult that person who has insight in the matters of farming.

Q - For you is farming a business?

A - This is not just a business but a very good business because there is nobody who orders me around.

Q - Last time you told me that fertilizer is about Rs.180/- per bag and now it is Rs. 250/-. Do you think that there is a profit if you consider the inputs and the outputs?

A - If I do not apply fertilizer I get only about 10 to 15 maunds yield per acre but if I apply 2 bags of fertilizer per acre I get a yield of about 30 to 32 maunds.

Q - What should the government do to make small farmers like you more successful?

A - The government should give loans for fertilizer so that farmers can purchase the fertilizer at the proper time. Secondly, the fertilizer should be supplied in ample quantities at the proper time. The government should

also arrange for enough water supply, and unadulterated pesticides, good seeds etc.

Q - Do you think that private market people, like the big fertilizer companies, should work more closely with farmers so that the inputs would be available on time?

A - At present the government controls the quality of supplies from these private companies. But the government is not doing this. The materials that we are getting are very substandard. It is always good that the private market people should supply inputs to us right on the farm.

Q - For example when the government says use 2 bags DAP for 1 acre and the farmers at the watercourse determine their need. The extension people say that they will supply this amount of DAP at such and such rate. Does this work?

A - This does not work because our demands are not met at the proper time. The private market people create shortages by hoarding. In this way the prices are raised and now fertilizer that used to cost Rs 203/- is sold at Rs 250/-. We get the advice that we should apply DAP at such time and urea at certain time. But at the time of sowing when we were in need of DAP there was a shortage of DAP, which was created, and now when we need urea, they have created a shortage of urea to sell it at a higher rate. Two years ago some bank people came and asked us if we were getting fertilizer or not. One of the farmers complained that since the fertilizer is required at the village and not at the near town dealers should deliver them here. The dealers in the city hide most of the bags and charge higher rate for them. So instead of providing the fertilizer

at the cities, it should be provided to some farmers at the village who will further distribute the fertilizer to all the other fellow farmers.

Q - What do you think of the approach that plans should be made at the farm level among the farmers, market suppliers and government?

A - This is how it should be done. For example, when we need fertilizer, there is none to be found, but when we do not need any, then there is a lot of fertilizer in the market. Government should not only determine how much fertilizer the farmer need but also when he needs it.

Q - How do you think that farmers like you can help yourself to achieve that plans be made at the field level.

A - We did approach the government but the government does not listen to us.

Q - How did you approach the government?

A - We have talked with the Director of the Bank but despite our weeping he did not help us. There was a time when we imported the pesticides from abroad, if we sprayed it on the yellow wasps then they all would die. If you take the pesticide of today and put it on an anthill, nothing will happen.

Q - Last time you told me that your biradari helps you when you are in need. Does the biradari also help you when they are competitors.?

A - The biradari plays an effective role in solving problems. If we have a problem then the people who are near to us will come and help.

- Q - There are different biradari's on this watercourse but do you think that profit making motive can put them together?
- A - Yes where profit making is concerned all the biradari's will join hands.
- Q - Can the farmers organize such a profit making organization?
- A - Unity is possible but the profits are to be earned through inputs and these inputs are in the hands of big people. If we have a dispute with the input dealers then we will land in jail not the dealer because he has influence. The government is in the hands of the big people we cannot do anything. The fact is that the big people are also the government and they are looting the poor people.
- Q - Let us talk about big farmers and small farmers. Most farmers usually talk to either big farmer or small farmer and not to farmer equal to their land holding. Why is this?
- A - One can learn some new things from the large farmers. When something new comes, it is always the big farmer who gets it first. Then we small farmers go to him.
- Q - Why do you go to small farmers?
- A - Because he is more dedicated.

II. Tenants

Mr. Aziz is 43 years old. He has no education.

Q - Mr. Aziz have you ever owned land?

A - We inherited 1.5 acre and we are five brothers, so it is actually nothing.

Q - How far does this go in your family. How many generations?

A - We migrated from India during Partition and settled over here.

Q - How much land were you given when you came here?

A - We were given one acre per family, which we have. In India before partition we had two acres.

Q - Was your father a tenant here?

A - After Partition my father was a tenant but he died after three years. Before partition he was a tenant in India also.

Q - Are your brothers tenants also?

A - Yes. We were six brothers. two died and now we are four. Three are tenants and one is a day laborer.

Q - One of your brothers was employed. What was he doing?

A - He was employed in the Railway workshop. Now he is retired.

Q - Education of your children?

A - Eldest daughter 3 years education, next son in fourth class.

Q - Who is your landlord Mr. Aziz?

A - Mr. Muhammad.

Q - How many times do you see your landlord a week?

A - He lives in this village and I meet him nearly every day.

Q - What do you talk with him about?

A - I discuss about matters related to agriculture such as fertilizer, sowing, harvesting etc.

Q - Do you share fifty fifty?

A - We purchase fertilizer and seed of sugarcane half and half. All other seeds are arranged by me. The produce is divided half and half.

Q - You said you talk to your wife sometimes why not more often?

A - Because she is not much concerned. She does not work in the farm, only in the house.

Q - Do you talk to other farmers in the village?

A - Yes, we talk about agriculture, about what is good and what is bad

Q - Mr. Aziz which farmer is the closest to you for information gathering?

A - One is my landlord and the other is Mr. Wakeel who owns fifty acres of land on the watercourse I work.

Q - Why do you talk to Mr Wakeel?

A - Because he knows a lot about agriculture and knows the government departments, fertilizer etc. He knows more than the others.

- Q - You said extension people do not talk to you. Can you tell me why?
- A - Since I am always busy in the farms the extension people come to the village to this common place where Mr. Wakeel is always present.
- Q - Is it because you are a tenant and Mr Wakeel is a big land owner?
- A - This year I am a tenant of one farmer, next year of some other. So I have no permanent land. The extension people come to those who have permanent land.
- Q - Do input suppliers come to you?
- A - In this village there are a few farmers who bring fertilizer from the agents and then I buy from them. If they don't have it then I go directly to (-----) and buy from the sub agents.
- Q - What did you sow in Kharif and Rabi?
- A - In Kharif I sowed one acre of fodder and one acre of sugarcane because water supply is very limited. Now I have four acres of wheat and half acre of fodder.
- Q - You said earlier that nobody comes to you and you don't even know how to buy inputs yourself?
- A - There is one Mr. Imran, I pay the money to him and he brings the inputs on his trolley which saves me the cost of transportation.
- Q - Did you help in anyway as the watercourse was lined, even though you are not a member?
- A - I am not a member but I have been working on the watercourses on behalf of my landlord.

Q - If you are not a member then what is the use of the WUA's for you?

A - The WUA is of no benefit to me.

Q - Is it useful for anybody?

A - I have no benefit and I do not know if it is of use to anybody.

Q - The charter of the WUA clearly states the anybody who is involved in farming should be a member of the WUA, there is no restriction to people who own land only. Have you read the charter?

A - I did not know that anybody who is involved in farming can be a member. I always thought that only land owners can become members.

Q - You do not go to the market to buy seeds, fertilizers etc. you get them from other farmers. How do you know that they are not cheating you?

A - If the fellow farmer has to pay black market prices so I also have to pay the same price.

Q - Do you consider yourself a businessman?

A - For tenants it is not a business. It is a business for those who own land.

Q - Do people who own land think of it as a business?

A - Only a few consider it as business, the majority do not think of it as a business.

Q - What kind of a farmer considers this as a business?

A - This can be considered a business but not a profitable business to anybody.

Q - Why is it not profitable?

A - The expenditure is more and I think I do not get my labor also so it is not profitable.

Q - You have a family of 8 people, how can you provide for them if this is not a business.?

A - Besides farming I also work as a laborer and earn sometimes Rs. 30 or 50 per day.

Q - Mr. Aziz if you were to be born again would you give up farming?

A - Even in this life I tried to give up farming for 8 years but I had to do it again as I had no alternative.

Mr. Rafiq is 45 years old and has 7 years of education. He has 2 daughters and 5 sons. The eldest son has passed matric (10 years) and 2 are in the 6th class and 2 are in the 2nd class. The daughters are not educated. The wife is also not educated. His father had 5 years of education and the mother was not educated.

Q - Mr. Rafiq did you or your father own land?

A - He had 2 acres and we are 3 brothers. I have only one half acre which is on another watercourse. It is not enough so I am a tenant.

Q - How are you working. Under what kind of arrangement?

A - I cultivate 6.5 acres of land. We share the cost of fertilizer and sugarcane seed half and half with the land owner, all other inputs are responsibility of tenant. All the produce is divided half and half.

Q - Who is your landlord?

A - The land is owned by Mr Jabbar who is an advocate and owns 8 acres of land. He lives in (-----) and practices law there. I see him about every friday when he comes here.

Q - What do you talk about?

A - We talk about matters of agriculture, what we have sown, other problems. About the land.

Q - What do you plant?

A - In Kharif I planted 1.25 acre sugarcane, one and half acre of maize and one acre of fodder. In Rabi I have now sown four acres of wheat and one acre of fodder.

Q - How much annual income do you get from the crops you grow?

A - Just about enough to eat. Last year we got 60 maunds of wheat (80 rupees per maund), Rs 1500 of sugarcane, and I have 2 buffaloes, 2 bullocks and two goats. I did not save anything.

Q - You have a family of nine. Is this income enough for your family?

A - We also sell milk and after two years one heifer so in this way we are pulling along, just hand to mouth.

Q - If your landlord does not let you work on his land then what would happen?

A - Then I will find some other land to cultivate. There is a lot of land available for tenants.

Q - Is being a tenant better than being a day laborer?

A - I think it is better to be a tenant because I work in my home.

Q - Do you own your own house?

A - I have my own house which I inherited from my father. It is pucca house of two rooms. I have my own plough, suhaga, bullocks etc.

Q - Are your sons working in other jobs?

A - My elder son who is matriculate also works with me because after education two years ago he fell ill and could not find a job. The next son did not have any education and is a heldar in the highway department. The youngest son is seven years old.

Q - Who buys the inputs?

A - I buy myself and then I adjust the amounts with my landlord.

Q - Do you make the farming decisions with your family? What do you talk about?

A - For farming I discuss with my wife and sons. We discuss all matters.

Q - Who do you ask for loans or other needs?

A - In this village I have biradari and relatives, so if I want a loan I can get upto Rs 1000/- for purchase of seed or fertilizer. I do not pay any interest on this loan. I usually repay the loans after 6 months to one year.

Q - Mr. Rafiq who else do you go for advice and information?

A - Sometimes I go to Mr. Wakeel for agricultural information. His land is on this watercourse and he is also biradari and neighbor.

Q - Do agriculture department people come to you? Do you learn from them?

A - Yes, they come here and hold meetings with us. I learn from them and they are useful. I get more yield.

Q - How many times did you talk to FA in the last year?

A - About three times. He comes and has a meeting with the farmers over here and advises the farmers about how to sow, apply fertilizer and other things.

Q - How about On Farm Water Management people?

A - Yes, they came last summer three times and after that they have not come.

Q - Irrigation department?

A - No they do not come here.

Q - Who tells you that the water is going to be cut etc.?

A - There is an announcement made in the village mosque about canal closure.

Q - Do you get enough water?

A - I have 15 minutes for each acre. So I have about 90 minutes which is just enough to irrigate about 1.5 to 2 acres in each turn after seven days.

Q - Did the canal lining help you in increasing your water supply?

A - The advantage is that no water is lost and there is no wastage. There is very little difference in the time.

Q - Is the land of the farmer you ask for information larger than the land that you cultivate?

A - Yes. He owns about 50 acres.

Q - Why do you go to him?

A - He is wiser as he has more experience.

Q - What is the common thing between you a tenant and he a big landlord?

A - Mr Wakeel is my biradari and friend also. There is no distinction between a big farmer and a small farmer among us.

Q - Are you a member of Water Users Association?

A - No because I do not own any land on this watercourse.

Q - Is your landlord a member of the WUA?

A - Yes.

Q - Can you attend the meetings?

A - Yes, I attend the meetings on behalf of my landlord.

Q - What do you talk about?

A - Collection of money, getting of bricks and material, and maintenance work.

Q - Do you agree you should have the maintenance?

A - Yes, it is useful for us. Before two or three days of the first release of water we clean the watercourse.

Q - Do you think you are a businessman?

A - This is a good business provided one has his own land. For a tenant this is not a profitable business unless he has a side business to make ends meet.

Q - What would happen if you become ill Mr. Rafiq?

A - Then my brothers usually work on my behalf.

Q - In your lifetime do you see an opportunity to own land in this village?

A - Everybody likes to own his own land, but I don't think I will ever be able to have my own land as I have no resources. My sons also cannot buy any land.

- Q - Is it true for all tenants that they have no realistic possibility to ever own land?
- A - They cannot buy their own land because the cost of land is so high, about 80,000 rupees per acre. A tenant cannot even think of buying land at this price. He is always hand to mouth. Whatever he saves he has to spend on marriages of his sons or daughters, maintain himself.
- Q - Approximately what is the percentage of tenants in this village?
- A - There are about 70 farms in this village, 50 are cultivated by the owners themselves and 20 are tenants.
- Q - Do you think the farmers who own land are businessmen?
- A - Yes it is a good business for those who have their own land.
- Q - What do you mean by business?
- A - Because one is earning a living from it.
- Q - But one also spends money.
- A - Yes, when one spends he earns also.
- Q - Are you making a profit or are you losing money?
- A - If we spend a Rs 100/- we can get Rs 125/-.
- Q - But other farmers tell me that input costs are very high but the produce sells for very little and there is not much margin. What do you think Mr. Rafiq?
- A - If I spend about Rs 1200 of inputs on an acre I can get about Rs 3200 from that acre. About 40 maunds of wheat. So this is a business.

- Q - Then who is right, the other farmers or you?
- A - I don't know, probably they mean that the cost of living has gone up very much.
- Q - Can government do anything to help you or tenants like you?
- A - Government can reduce the high cost of fertilizer and seeds. The government is looting us and I don't think it can do anything for us. It would be better if government increases water supply and the canal is not closed.
- Q - How about an organization of group of farmers or tenants?
- A - Yes, we should have a union. Previously a Director came and told us to make unions but after that I don't know if they were made or not. There was no consensus of the farmers on this issue, no unity.
- Q - How can unity be possible among farmers?
- A - There can be no unity among farmers. The laborers in a sugar mill can go on strike but the farmers have never gone on strike.
- Q - Do you think that things will get better in farming or worse?
- A - I think that the farming business is progressing. Maybe my condition will also improve by the Grace of Allah.

III. Input Suppliers

Mr. Abdulrahman is 50 years old and runs a combined business together with his elder brother Mr. Arshad. Mr. Abdulrahman deals mainly with fertilizers whereas his brother deals with vegetables. He is married and has 7 children; 5 sons and 2 daughters. The elder daughter is in the 8th class and the younger daughter is in the 5th class. One son is doing M.Sc. another is matriculate and is helping in the business. Another son is Hafiz-ul-Quran and the others are going to school. Mr. Abdulrahman has five years of education. His parents were not educated.

Q - Is there anybody in your family who is doing farming presently?

A - Not directly, but people come to us for advice because Arshad is in the vegetables business.

Q - Was there anybody in your family involved in farming in the past?

A - My maternal grand father and uncle were.

Q - What did your father do?

A - My grandparents were inhabitants of this area. So my grandfather was holding a piece of land but my father left his farming land and went into business.

Q - In your business do you basically deal with fertilizers.

A - Previously I was dealing solely with fertilizer but nowadays we have started the general merchandise business i.e. non-farming.

Q - Do you have close contacts with farmers?

A - Yes we have a very direct contact with farmers

Q - Do they come to you for information?

A - My elder brother is an expert in vegetables and cash crops and farmers in the area come to him to seek advice on fertilizer and vegetable matters, methods of applications etc.

Q - The farmers that we have talked to in the last five months, every single one of them, complained about the high price of fertilizer and not only fertilizer but seed and pesticide prices are also high. What they put in they cannot get in return in the market.

A - I was in the business for the last ten years and in those days the fertilizer that was being supplied was in pure form and therefore giving more yield than the adulterated fertilizer which is now in the market. The farmer wants urea, but people are selling urea mixed with ammonium sulphate, which has 21% Nitrogen. Urea has 46% Nitrogen, so the farmer says he has applied urea and has gotten return less than half.

Q - You know this because you are in the business but the farmers, do they know this?

A - In this business of fertilizer nobody can survive without adulteration. Due to this fact, I have extended my business to general merchandise. When the farmer asks for cheap fertilizer, we have to say that we have no number 2 fertilizer. But the clients say that fertilizer is available at the other shops and at the same rates. The DAP was being sold in the bags of U.S. AID, with the two hands, and these bags were in very good condition. Now the farmer, being illiterate, does not know what to do. So he has to purchase that fertilizer. The adulteration in this business has gone to such high extent that nobody can imagine being in

this business without going into malpractice. That is why we have gone onto general merchandise.

Q - Is the sign of the U.S. AID, the two hands printed on the bags.

A - Yes.

Q - How can they adulterate the USAID stuff?

A - These empty bags are available in the market. Every brand of fertilizer bags are available in the Faisalabad market.

Q - These companies whose signs are on the bags, do they know about this.

A - They know but they are unable to control it because the administration does not help them. the situation is going from bad to worse in Pakistan. Nobody is bothering, every where there is adulteration and malpractice. You can get number 1, 2, 3 and 4 quality of fertilizer .

Q - What is No. 1?

A - This is pure fertilizer. No. 2 fertilizer has less weight and No. 3 fertilizer is the one which is adulterated and even less weight, and No. 4 is all adulterated and less weight and it is put in new and very good bags.

Q - Are there any price changes in these different qualities of fertilizers.?

A - The inferior and adulterated fertilizer is being sold at fixed rate and the No. 1 is being sold at a higher rate at the black market. Since the common man cannot differentiate so he will buy it at a fixed rate. The

dealers buy the no. 2 quality at a less rate but when they sell it they sell at it the full rate. For instance for DAP he will purchase 10 bags no.1 and 90 bags of no. 2 quality but when he sells it he will sell at full rate. An example of another practice is that of those who are dealing with Babersher urea. The bag's weight is 50 kilos. What they do is that they remove 2 Kg from this bag and 48 Kg. are sold. This removal from 24 bags will make another bag.

Q - This practice is going on for how long.?

A - This has been going on for so many years.

Q - If the farmer uses this fertilizer and does not get the desired results, at some time will he not realize that something is wrong.

A - Actually this is the responsibility of the people of Fauji Fertilizer or National Fertilizer (NFC). They should go to the common farmer and educate them. They should make vast announcements that adulterated fertilizer is being sold. But they are not bothering. The big landowners know this and purchase their fertilizer from the factories, but the small farmer buys only 2 or 3 bags, so he has no purchasing power and ends up buying the adulterated stuff. If he knew this he would stop purchasing adulterated fertilizer. This is the responsibility of the Company. They should check the dealers and the quality of fertilizer they sell. They should cancel the dealership if they are found selling adulterated fertilizer.

Q - Can the farmers get together and say they will not buy fertilizer from Dawood?

- A - This is not the fault of Dawood or NFC. It is the agents who are doing the malpractice. The adulteration is done locally. The small farmer is not in the position to judge which is the adulterated fertilizer or not. The inspectors from the big companies go only to the big landlords and check the fertilizers. These are naturally pure. The companies should make their field representatives to go to the poor farmers where the adulterated fertilizer is.
- Q - Can the farmers get together and say that we are not going to buy from such company.
- A - The farmers should be made aware to check the quality. I am dealing in fertilizers. If we put pure and adulterated DAP on a table and ignite them, the pure DAP will catch fire and the adulterated will not. The farmers can be taught these kind of checks.
- Q - How can the farmers be made aware of this?
- A - It is the duty of the firms to force their field officers to hold meetings and seminars to show the farmers which are the signs of pure fertilizer and adulterated fertilizer, but nobody is doing this. Unless this is not done, the farmer will be cheated.
- Q - What is the government doing?
- A - Nothing. They are a party to this adulteration.
- Q - What are the field assistants and agricultural officers doing when they see that the farmers are using adulterated fertilizer?
- A - The duty of FA and AO should be to make the farmers aware of what is pure fertilizer. If they (FA and AO) know what is pure fertilizer they should educate the

farmers. They are only advising the farmer on how much fertilizer to use, but they will not tell how to differentiate between pure and adulterated fertilizer. Basically the solution to the problem can only be achieved by educating the farmers through the representatives of the companies and the extension staff so that farmers can judge for themselves. If the present practice continues then in a few years, the small farmer will starve to death, because he is not getting the increase in produce according to the amount of money he spends on fertilizer. If the farmer is educated, he can make a complaint to the authorities (police, company) but he doesn't know that I am selling adulterated fertilizer. He is ignorant.

Q - Education in schools or in the field?

A - The government has a fleet of officers. Why don't they go into the field and teach the farmers? What are they doing? They are sitting in their offices, drinking tea and not going to the field. The extension staff should hold field training and should give practical training to the farmers about recognizing adulterated fertilizer. Then the farmer who comes to the city to buy fertilizer can identify the quality of fertilizer he buys. Unfortunately at this stage, nobody is assuming responsibility for this issue. Neither the companies, nor the extension people.

Q - Nearly 91% percent of the farmers talk to their fellow farmers about fertilizer, seeds, pesticides etc.. They are getting information from each other. And they also ask the private market people. How is it possible then that farmers cannot know about this adulterated fertilizer?

A - This is not in the knowledge of the common farmers, rather it is in the knowledge of the big farmers only. Since they are getting the pure fertilizer, they are not going to talk to the small and poor farmers. In addition, the black market people are so clever, that even if a farmer suspects that the fertilizer is adulterated, they will convince him that it is pure and very good. He will only find out after one year that the fertilizer was adulterated. By that time the supplier may have gone to another village and so on.

Q - Just to be sure of the facts on the previous tape. Are there really four different qualities of fertilizer?

A - The PADSC (Punjab Agriculture Seed Supply Corporation) officials are also involved in this black market. They were supplying underweight, they were also addicted to this malpractice of adulteration. Number 1 is the pure one, number 2 is underweight, number 3 is this colored mix and everything, number 4 is adulterated and underweight.

Q - How much does the farmer pay for number 2?

A - If the dealer sells at a low rate then the farmer will become suspicious, so it is sold at full rate.

Q - Who gets number 4 and who gets number 2?

A - Although I am in the black marketing, but when there is a shortage and I go to purchase fertilizer they ask me whether I want number 1, 2 or 3. When I purchase number 1 material, it is so costly that I will sell it at the same rate without profit. That is why I shifted to the side business. This is not just the case with fertilizers only, even in chilies, there are number 1 and number 2 chilies.

Q - Suppose you and I are old friends. You are the dealer and I am the poor farmer. I come to you and say, this year I need 50 bags of fertilizer. You think I am your friend so you will give me number 2 instead of number 3. How is this decision made?

A - The people start black marketing at that time when they have a problem. The problem being that he is not getting enough quantity and/or he is not getting enough money. So he starts adulteration. But once he starts adulteration, nobody is dear to him because he started going one side of the rules. So when I have started number 2 material I will sell it to my friends and to my enemies.

Q - Thank you.

Mr. Mumtaz is 44 years old. He has six years of education. Mr. Mumtaz is married and has 8 children; 7 daughters and 1 son (the youngest). The eldest daughter had 12 years of education. The second has also studied 12 years. The third and fourth daughters are in the 11th class. The fifth is in the 5th and the sixth in class four. The son is in the 1st class. His father was a businessman and had one year of education but could read and write. The mother was illiterate. He has three sisters. He was the youngest. The two elder sisters were illiterate but the younger sister studied 10 years. All married and housewives. The father lived in a village about 5 miles from here. Mr. Mumtaz moved to (-----) in 1950. He still has a shop and a house in his village. No farmers in his family.

Q - Mr. Mumtaz what kind of agricultural information do the farmers ask from you.

A - I am a dealer of NFC and Dawood. These two companies supply me from time to time with information regarding which fertilizer to use and how to use them. So the farmers ask me about fertilizers. What quantity to use before sowing and after first and second irrigation. The farmers also tell me the experiences they have with fertilizers they buy from me.

Q - Do you also deal with other inputs like seeds or pesticides?

A - I am dealing with fertilizers and seeds. For seeds I am dealing with wheat and paddy seeds. I am getting these seeds from the Seed Corporation.

Q - In my last study I found out that the majority of the farmers do not use corporation treated seeds because they think their home grown seed is good. What is your

opinion?

- A - Generally the small farmer obtains his seed from the previous crop. When the crop matures, he reserves the good crop for seed purposes. Moreover, the seeds which are supplied from the corporation are in very limited quantity. If in this area 1000 bags are required only 100 bags will be supplied. In addition the seed which is supplied through the corporation is very costly and ordinary farmers cannot afford it. Generally the big landlords take up all the corporation seeds.
- Q - Mr. Mumtaz are you aware of the recommendation made by the Department of Agriculture, that the farmers should use corporation treated seed?
- A - Yes.
- Q - Do you think that the Department is aware that there is not enough seed available in the market when they make this recommendation?
- A - The Department is well aware of this. When we request that they give us so much seed they also tell us that it is limited and give us less.
- Q - Why did the Department make this recommendation if they know the fact?
- A - The Department of Agriculture, the Seed Corporation, NFC and Dawood are separate entities. There is very little cooperation within the organizations. The Agriculture Department has to justify its existence so they make these recommendations. Even though the farmers are not able to follow these recommendations. The same is the case with the recommendations concerning fertilizers. If we really want to make the farmers work in accordance with the recommendations

then there should be a close cooperation between the input supplier and the Department of Agriculture. When they make the recommendation they should make the arrangements for the right amount and timely supply of these inputs.

Q - Mr. Mumtaz you have been in this business for a long time. What is the difference between the corporation treated seed and the farmers own seed?

A - The corporation surveys the fields of the big farmers and then collects the seeds from the areas which is free of diseases and weeds. That seed is multiplied further by the corporation. The farmer thinks this is the same seed which was collected from our fellow farmers. The seed supplied to the farmer is double the amount of that sold to corporation by the farmers. The farmer's wheat sells for Rs.80 per maund and the same wheat when sold by the corporation as seed costs Rs.150/- per maund. Therefore the farmer realizes this and is not willing to pay nearly double the cost for what he can get for less. This is the feeling of the farmers over here.

Q - Is the corporation treated seed scientifically superior to the farmers own seed?

A - Corporation seed is better because it is treated with chemicals and is sieved separating the small seed. But the farmer also keeps the seed very properly by cleaning it and storing it in bags and applies some chemicals (anti-rodent) and it is not bad seed.

Q - Farmers tell me that they always want Hi-Yield. The small farmers thinks that he cannot get this Hi-Yield varieties from the extension or other services. They

believe only big farmers get these seeds. Then if the yield is better on the farms of the big farmers then the small farmers try it.

A - This is correct for the variety which is released for the first time. The big farmers collect it from the research stations or centers of the corporation. That seed is not supplied to the small agents. At that time it is not in the reach of the common farmer. For the first time the seed goes to the big farmers, they multiply it and sell it at higher rates. The small farmers get the new variety after two or three years, when it is in abundant supply with the big landlords and available at the small commission agent's store.

Q - The goal of the Department of Agriculture is to increase the yields of different crops in the country. But this method puts a distance of two or three years between the large majority of small farmers and the small minority of large farmers. In this way the increase in yield becomes slower. What do you think?

A - If the new variety of seed is given directly to the small farmer, they would eat most of it and sell what is left in the market and very little or none would be left for next years seed. The large farmer on the other hand can grow on say four acres of land which will then serve as seed for fifty acres the next year and so on as it will all go to the seed corporation. The existing practice is therefore more practicable.

Q - The government spends considerable amount of money on demonstration farms. The small farmer is not willing to take a risk. But if he sees a demonstration farm which shows that it is indeed not a big risk, because a demonstration farm would be very easy to visit and

observe for a period of time, he would go for it. Would this be a better method?

- A - Demonstration plots are also generally laid on large farms of large landlords and are not available to the common small farmers. The small farmers are only invited there on some occasions to show them the yield etc.
- Q - What is your suggestion?
- A - What I suggest is that whenever there is a new variety, technique or technology, the government should provide small farmers, having less than 12 acres with at least one acre supply of seed fertilizer, pesticides. free of cost under the supervision of the agriculture department. In this way the small farmer gets the new variety and the confidence to further extend the area next year.
- Q - Would you accept the fact that there is a vicious circle that the small farmer is constantly behind and is never able to close the gap?
- A - One reason is that the government itself is composed of large landlords who will always look after their own interests. Large bank loans are also taken by these large farmers. Small farmers do not get loans, even if they do they are harassed so much. Yet the large farmers are given very easy terms. The government will not do anything unless suppose a small farmer is elected or becomes a big officer, but this never happens.

Q - Is the small farmer like a blindfolded bullock on a well drawing water for others?

A - I agree that it is like that. The small farmer always worries about daily food and survival. They are blindly used and their thumb impressions are collected to attest that everything is going O.K. But they are actually being given nothing and everything goes to the big farmers.

Q - All the farmers complain that the prices of fertilizer are high and when they need the fertilizer it is also not available, because if the dealer gets 500 bags he puts only 100 in the store and 400 behind the store. He tells the farmers that the fertilizer is sold out, but he will supply at higher cost. What is going on?

A - This year the procurement and import of fertilizer was below the requirements. The supply was less as compared to the demand. Also the procedure to get fertilizer from the industries is very difficult. The National Fertilizer Corporation usually delivers about three months after placing an order. On the other hand Dawood company supplies well in time but this year they imposed certain conditions due to which our costs went up. Therefore if we sell at the fixed price we suffer a loss and to make up for that loss we have to sell some bags at a higher cost. There is no businessman who will not sell if he has the fertilizer, otherwise how will he make a profit.

Q - Many farmers say that farming is a business. What do you think?

A - It is a business for the large farmer. A farmer who has only 3 or 4 acres is barely surviving. He is not doing agriculture as a business.

- Q - You are a businessman. You think of a lot of things in your business. The farmer also makes a plan even if he has two acres of land. He thinks how much fertilizer, seed etc., he needs to survive. So do you think that the farmer thinks like a businessman?
- A - Yes he thinks about all these things such as what to sow and when etc. like a small shopkeeper. But he does not make enough money. I think it is very difficult to make money honestly even by small shopkeepers. The shopkeeper can run a business dishonestly and do some malpractice, but the farmer cannot.
- Q - Is the farmer a manager?
- A - Yes, he is a manager because he does not sit idle and leave everything to chance. He makes plans.
- Q - Educated people say farmer is not a businessman, he is ignorant and is just trying to make a living, and does not know about business. What do you think?
- A - This is not the case. The farmer is actually a businessman, because if he does not make a profit in one crop he will grow another one next year. The difference is that the poor farmer has no guidance, resources, capital, and nobody to assist him. The big farmers get loans, financial help etc. and make a lot of profit. So they say that they are businessmen and the small farmer is not a businessman. Ten fifteen years ago there used to be a lot of cotton grown in our area. Over the years slowly due to changes in weather and soil or seed conditions the yields dropped very much. So all the farmers stopped growing cotton because it became uneconomical, so they acted like businessmen.

- Q - Do you know that there are farmer groups called Water Users Associations formed in your area?
- A - Yes I know about that. Since they are in the villages and the members are all from the villages, and we have not much to do with it so we are not directly involved.
- Q - Two years ago I asked farmers about WUAs and they were very interested. Now when I ask them they say that the canals are lined and we don't know what this organization is about.
- A - This is because the WUAs did not do anything after completing the watercourse. They think that they have no more responsibility after the watercourse is improved.
- Q - Do you think maybe farmers should be organized on profit making basis? Do you think it is a good idea.
- A - If they are going to make such a committee they should not include a large farmer, because if they do then everything will be taken over by the large farmer and the small farmers will become mere puppets.
- Q - The people at the provincial level cannot come to the field, but you the farmers and the AOs EADAs can talk and make plans together. Then the plan goes up. In previous years the plan is made at the top and sent down. But if we say let us make the plan here and send it up? What do you think?
- A - This plan will work if for example we need fertilizer in October then they should make arrangements to have our requirement by August and not in November. Our demands should go to the provincial level well in time.

Q - Do you believe that this can happen?

A - Yes, but it will take time and when it comes into practice then things will improve.

Q - Some people I interviewed -- farmers, officials, educated people -- say that the farmers are not educated and do not know what they need. What do you think?

A - It is the farmer who is doing the work, it is the requirement and need of the farmer, if he does not know then nobody knows. People sitting in air-conditioned offices cannot know what the needs of a farmer are.

CHAPTER VII

CONCLUSIONS AND RECOMMENDATION

"We've only just begun" The Carpenters

A. INTRODUCTION: WHY THE EMPHASIS ON COMMUNICATION?

In the introduction of the report on the 1988 survey the act of communication was defined in coorientational terms. It was stated that sharing an orientation between information-seeker and his/her sources is quite important because when people communicate, they try to orient each other toward a situation. Communication among humans is as successful as their coorientation towards a situation.

In the report (1988) an example was provided to explain coorientational states in a communication situation.

Imagine if you will a farmer (F) and a city person (CP) engaged in conversation about the weather:

CP: It is terribly hot today. Temperature is at 39°C.

F: Yes, but this weather is good for the rice crop.

CP: Are you joking, this kind of heat is not good for anything.

What transpired between the farmer and the city person can be explained according to the states of coorientational model.

1. Understanding: Both farmer and city person understand and agree that the temperature is at 39°C. Their understanding and agreement are based on the cognitive knowledge of temperature in their heads..there is an overlap of facts.
2. Agreement: On the usefulness of heat they disagree. The feelings and beliefs do not overlap.

The city person has a negative orientation towards heat. He has pictures in his head of sweating in crowded buses and sleepless nights due to heat. Farmer also suffers from heat but the rice crop is his livelihood and, therefore, he was able to develop a mental tolerance toward heat. In this respect, there is an imbalance in their communication (Newcomb, 1966).

What can happen if these two people would have time to communicate further? The farmer could provide more information on the rice crop and how it grows. And city person can explain how he has to work in offices with no air conditioning, etc. So they would start establishing an understanding. The new pictures would develop in their heads. Eventually, the city person and farmer may come to an understanding--- they agree to disagree.¹

The two variables, understanding and agreement are essential elements of useful communication. The agreement used in coorientational terms does not necessarily mean that people do agree with each other on the subject of communication. But their agreement is more of an understanding of each other's stand on the issue in discussion.

In a long-term human interaction, an understanding develops between communicating parties. People talking to each other frequently start understanding accurately the other party's cognitive state. Many pictures in their heads gradually start overlapping. They still may disagree but understanding why they do so accurately.

In developmental work communication can be used as a vehicle to create an understanding between the source of information and information-seeker. It is not an easy task but rewards are gratifying.

In the present follow-up survey the majority of farmers in the sample reported that they understood the information provided by their sources (90%). However, they did not particularly agree on the usefulness of information they received. These data show that with their fellow professionals farmers were able to develop an understanding. But at times, they thought that information provided by fellow farmers may be accurate but not useful. A state of coorientation exists between fellow farmers in their exchange of agricultural information.

In the present study the employees of the Department of Agriculture were asked to estimate :

1. Use of recommended practices by farmers in their jurisdiction (working area);
2. Farmers' information-seeking activities in various agricultural matters;
3. And most frequently used information sources by farmers in agricultural information-seeking.

The results are displayed in Tables 46, 47, and 48.

The response set by the employees in all three areas can best be described as a "shot gun" approach. They hit some and missed many. The field staff were more accurate in their estimations than the office staff. Because the field staff are in more frequent contact with farmers than their office counterparts.

The most critical finding shown in three tables is the wide spread of estimations by the employees. (Please refer to Appendix B for standard deviation figures and graphs). This constant dispersion on practically every item shows the low level of coorientational communication among the staff on matters related to their jobs.

The coorientational communication is a two-way exchange. It requires listening to the other party during the course of conversation. In the pecking order of

TABLE 46
ESTIMATION OF FARMERS' ADOPTION OF OFFICIALLY
RECOMMENDED WHEAT CULTIVATION PRACTICES
BY FIELD AND OFFICE STAFF

(N = 81)
(In Percentage)

ADOPTION ITEMS	POSITION	ESTIMATION			
		LOW (25 -)	MEDIUM (26-50)	HIGH (51-75)	VERY HIGH (76-100)
1. Use rotavator for land preparation. (Adoption rate reported by farmers. <u>20%</u>)(*)	FIELD	90	10	--	--
	OFFICE	97	--	3	--
2. Apply 40Kg. Seed per acre. (Adoption rate reported by farmers. <u>85%</u>)	FIELD	--	4	18	78
	OFFICE	3	10	26	61
3. Use treated seed. (Adoption rate reported by farmers. <u>19%</u>)	FIELD	78	20	2	--
	OFFICE	87	10	3	--
4. Apply 1st irrigation after 12-18 days of sowing. (Adoption rate reported by farmers. <u>65%</u>)	FIELD	24	20	31	25
	OFFICE	35	19	32	14
5. Time most important irrigation at grain formation. (Adoption rate reported by farmers. <u>88%</u>)	FIELD	2	10	35	53
	OFFICE	10	10	32	48
6. Apply last irrigation at the end of March (Adoption rate reported by farmers. <u>88%</u>)	FIELD	22	37	22	19
	OFFICE	13	26	42	19
7. Apply 'Heavy" irri- gation at 2nd & 3rd irrigations(Adoption rate reported by farmers. <u>30%</u>)	FIELD	45	16	21	18
	OFFICE	55	13	22	10
8. Weeding after first irrigation using bar harrow (Adoption rate reported by farmers. <u>38%</u>)	FIELD	41	35	18	6
	OFFICE	58	29	10	3

(*) From 1988 survey by Nayman

TABLE 47
ESTIMATION OF FARMERS' AGRICULTURAL
INFORMATION-SEEKING ACTIVITIES
BY FIELD AND OFFICE STAFF

INFORMATION ITEMS	POSITION	ESTIMATION			
		LOW (25 -)	MEDIUM (26-50)	HIGH (51-75)	VERY HIGH (76-100)
a. Irrigation Water (Information-seeking reported by farmers:62%)*	FIELD	22	16	23	39
	OFFICE	25	19	16	40
b. Irrigation practices (Information-seeking reported by farmers:40%)	FIELD	27	35	26	12
	OFFICE	63	25	12	--
c. Land levelling (Information-seeking reported by farmers:18%)	FIELD	45	39	10	6
	OFFICE	75	22	3	--
d. Seeds (Information-seeking reported by farmers:94%)	FIELD	6	14	29	51
	OFFICE	6	19	31	44
e. Fertilizer (Information-seeking reported by farmers:70%)	FIELD	6	18	21	55
	OFFICE	6	22	22	50
f. Sprays (pesticides, insecticides & weedicides) (Information-seeking reported by farmers:82%)	FIELD	8	20	29	43
	OFFICE	28	22	19	31
g. Farm Loans (Information-seeking reported by farmers:27%)	FIELD	65	29	4	2
	OFFICE	59	28	3	10
h. Marketing (Information-seeking reported by farmers:82%)	FIELD	67	12	8	13
	OFFICE	50	31	13	6

(*) From 1988 survey by Nayman

TABLE 48
ESTIMATION OF FARMERS' USE OF AGRICULTURAL
INFORMATION SOURCES BY FIELD AND OFFICE STAFF

(N = 81)

(In Percentage)

SOURCE OF INFORMATION	POSITION	ESTIMATION OF USE				
		VERY OFTEN (76-100)	OFTEN (51-75)	SOME- TIMES (26-50)	RARELY (25-1)	NEVER
Field Assistant	FIELD	22	27	41	10	--
	OFFICE	9	35	25	31	--

Use reported by Farmers: (N = 240) (*)						
Always: 10% Sometimes: 25% Never: 65%						

Agricultural Officer	FIELD	8	10	45	37	--
	OFFICE	--	6	47	47	--

Use reported by Farmers:						
Always: 3% Sometimes: 12% Never: 85%						

Mobile Credit Officer	FIELD	--	--	15	83	2
	OFFICE	3	6	3	88	--

Use reported by Farmers:						
Always: 2% Sometimes: 21% Never: 77%						

On-Farm Water Management Officer	FIELD	6	18	27	49	--
	OFFICE	3	10	24	63	--

Use reported by Farmers:						
Always: 55% Sometimes: 43% Never: 2%						

Zeladar	FIELD	4	--	10	74	12
	OFFICE	3	3	14	70	10

Use reported by Farmers:						
Always: 1% Sometimes: 37% Never: 62%						

Other Farmers	FIELD	19	50	21	10	--
	OFFICE	31	22	34	13	--

Use reported by Farmers:						
Always: 91% Sometimes: 9%						

Private Market	FIELD	--	6	16	78	--
	OFFICE	--	13	37	50	--

Use reported by Farmers:						
Always: 61% Sometimes: 39%						

(*) From 1988 survey by Nayman

bureaucracy "listening" has a different meaning. The superiors "talk" and the subordinates "listen". In this one-way process, understanding, which is the essence of any meaningful communication, is lost.

To study the process and patterns of communication in a formal organization is one of the ways which may help to initiate new, and hopefully improved, ways of interaction in that organization with its internal and external publics.

B. HIGHLIGHTS OF THE STUDY

The Department of Agriculture is a rigidly structured organization. The core dominates the peripheries. The top-to-down approach of management is not appreciated by the employees. The autonomy needed to innovate is curtailed because of the "package" approach to technology transfer. The "package" prepared almost exclusively by the core does not contain the realities of the field most of the time. Particularly employees in professional cadre are frustrated because they feel they can contribute to the production planning from their day-to-day observations in the field. In fact employees do not like the "package" approach at all. They believe a mutual agenda set by the farmers, periphery and the core would bring the desired results.

The employees mainly come from rural backgrounds. However, their family characteristics suggest that they belong to upwardly mobile segments of rural Pakistan. They are achievement oriented.

The social mores and norms of Pakistani society are very much intact in the structure of the Department. The stratification among the ranks is quite rigid. The superiors act like the patriarchs of the clan. As one respondent said, "the superiors treat subordinates like children."

The promotional process is slow and deliberate. The merit is considered as a de jure requirement. However, top echelons are careful in promoting their subordinates. As one respondent desperately indicated: "We are helpless. Flattery counts a lot in promotions."

The employees of the Department of Agriculture are interested in making changes in their jobs, communicating better with their clients, being able to transfer the appropriate technologies and willing to include farmers in the decision making process. However, they are in a quandary if they indeed can make any difference. The strong grip of the core on the peripheries stunts the ideas and desires of the employees to experiment with "new" and "different" ways. Understandably frustrated by the dominance of the core, employees are withdrawn: "We think about the problems but are willing to do the minimum."

In accordance with its structural characteristics the patterns of communication in the Department are asymmetric and one-way.

On the other hand in the farming communities the communication is relaxed. Farmers communicate with each other for information gathering and agenda setting without the pressures of organizational pecking order. They talk to large as well as small farmers in equilibrium. However, it would be naive to state that stratification does not exist in rural Pakistan. But the communication on agricultural matters between farmers seems to be more on the professional order as one respondent put it: "farmer to farmer talk".

The agenda setting by the farmers starts at home. The son is the trusted confidant. The wife also involved in the agenda setting. The farmers in differing degrees also include others within or outside of their village in their deliberations on agenda setting.

The second source to family members in agenda setting is the fellow farmer on the watercourse. He is after all a business executive and his views are duly respected.

Farmers use multiple sources in addition to their most frequently contacted ones in their information gathering on agenda setting.

The information is sorted carefully for its usefulness. Sometimes the source may provide accurate information but farmer thinks it over and finds it not useful for his purposes. Asked about how they can really differentiate between useful and not useful information the majority of farmers said "I have a mind," "I take time to think," "I experiment."

The use of official sources of information are not excluded by farmers in agenda setting. Frequency of their presence in the village is not high. Therefore the frequency of contacts with official sources of information is also not as high.

The business interest in the farming community is genuine. The profit making as a motivation for farming is common. As one farmer put it "if farmers are not thinking in business terms they should not be in farming." This concept was shared by many farmers. The marginal land holders (1 or 2 acres) feel that their farming is at a subsistence level. But then it is.

The demographic backgrounds of farmers in the sample pose a stark contrast to that of the employees'. Education runs quite low in farm families.

Two groups of people and almost two different worlds. Despite that employees mainly come from rural areas and practically are the "distant cousins" of the farmers there is a gap between them. The gap that mostly relates to social norms. The educated versus uneducated. Government servant versus farmer and most ironically bureaucratic periphery

versus rural periphery (farmers). It is sociologically understandable because every social class perceptually distinguishes itself in comparison to the class under it. But the concern here is not with the class differences but the government services. Services of the bureaucrats to their legitimate clients.

If any progress needs to be made in Pakistan the gaps within the chain of bureaucracy and between bureaucracy and its clients have to be closed.

C. MUTUAL AGENDA SETTING: A KINDER AND GENTLER OPTION

In 1848 Karl Marx declared: "A specter is haunting the European capitals. The specter of Communism." Indeed it was. The ensuing decades witnessed the loss of millions of lives around the world in a destructive pursuit of an ideology. A misappropriated ideology that warped the nations, created "killing fields", and deprived the humans of their most essential right: to express themselves and their real needs freely. Under the slavish rule of bureaucracies the socialist countries suffered the stagnation in every sphere of life. The agriculture was not an exception. In fact the agricultural failures in Russia and other socialist countries can serve as the textbook examples of "what not to do."

Galbraith states:

Socialism as it matured, had a task that Marx and Lenin did not foresee: that was the production of consumer goods in all their modern diversity of styles, design and supporting services. That was the model set by non-socialist world. With this a centralized planning and command system could not contend. Nor could it contend with the special problems of agriculture, an industry that

functions well only when blessed by the self motivated energies of the individual owner and proprietor.² (my emphasis)

Galbraith continues to define the impeding nature of bureaucratic structures:

There is a further tendency of great organization to proliferate personnel; nothing so measures bureaucratic significance and prestige as the number of one's subordinates. Nothing so eases bureaucratic life as willing subordinates who spare one thought and action ... But most important of all, bureaucracy defines its own truth ... The hold of bureaucratic truth was, however, far more unrelenting in the socialist world. There it enforced comprehensively the belief of those within the bureaucratic structure; there it extended its reach comprehensively to those outside.³ (my emphasis)

Throughout this report I repeatedly emphasized the incapacitating characteristics of bureaucracies in low income countries in the process of agricultural development. The focal point of my theoretical proposition is that when deeply involved in the modus operandi of the productive sectors of a country the bureaucracies become unmitigated forces in the way of progress. Somehow, the bureaucracies in Western countries have capacities to adapt the changing socio-economic-political environment. In some big entrepreneurial bureaucratic organizations (i.e. General Motors, IBM, etc.) there exists a certain degree of flexibility (entropy) which make them ultrastable.⁴

Cadwallader explains:

An open system, whether social or biological, in a changing environment either changes or perishes. In such a case the only avenue to survival is

change. The capacity to persists through a change of structure and behavior has been called "ultrastability." If a complex social organization is to survive critical changes in its environment, it can do so only by changing its structure and behavior ... "Mistakes" in the identification, analysis and synthesis of information may be the source of novel behavior ... Finally, in doing so the system will have achieved the state of ultrastability which, for an open system, is the optimum road to survival.⁵ (my emphasis)

The changes that took place in private agricultural sector in the United States influenced the government to respond by making changes in its structure and behavior. For example in a free enterprise system such as the United States the heavy subsidies are accorded to agricultural production. As a consequence, farm prices are higher and or consumer prices are lower than they would be without such government intervention.⁶ The system had to adapt itself to rapid urbanization and mechanization of agricultural industry. This could be one of the reasons why the big organizations public or private managed to survive in the West. As Galbraith puts it: "The Western commitment to bureaucratic or institutional truth has been less than that of the Eastern European countries. In the West inconvenient thought and its consequences, however deplored, could not, to the regret of many, be suppressed."⁷

The flow chart of organizational structure -- based on the data collected in this study -- reflects the present situation in the Department of Agriculture (Please refer to Figure 1 on the next page).

The Figure 1 shows the centralized decision-making leaves very little room for the inputs from the peripheries in agenda setting. Under the prevailing circumstances an

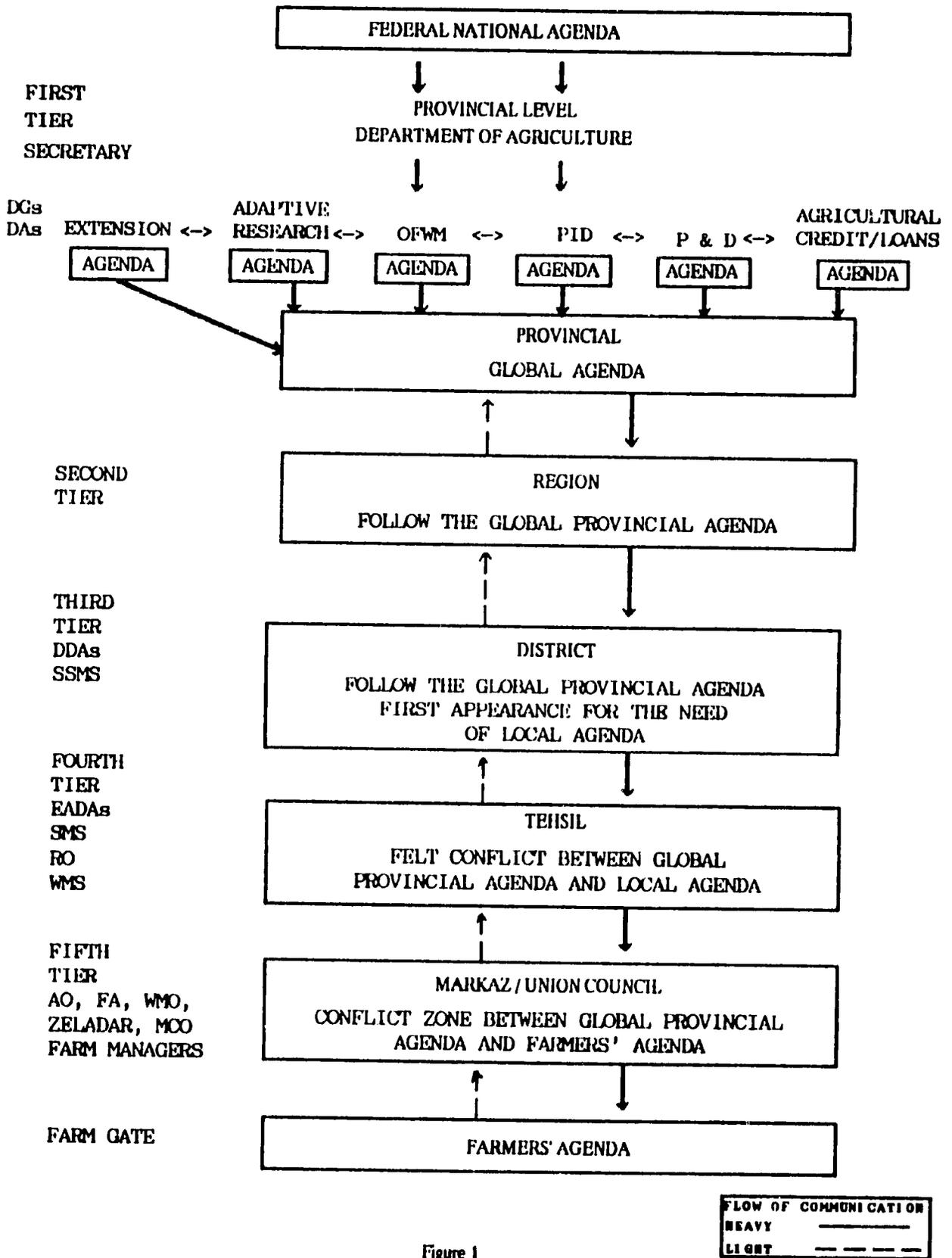


Figure 1
FLOW CHART OF COMMUNICATION ON PRESENT AGENDA SETTING
(REPEAT)

increase in agricultural production would be slow. And it is. Because with a lopsided agenda setting process the optimum potential for agricultural production cannot be realized. The core, almost isolated from the potentialities of the peripheries, would not be able to optimize them. This is one of the reasons why the centralized planning in agriculture did not work in the socialist countries. And unless serious changes are made this kind of agenda setting will not help low income countries either. But there are common sense options. Options that may dislocate the status quo but not the governments. I call them the kinder and gentler options. One of these options is mutual agenda setting.

In Figure 3, a chart of communication flow in mutual agenda setting process is presented (Please refer to Figure 3 on page 170). In a tripartite cooperation farmers, public and private sectors mutually set a seasonal agenda for agricultural production. This seasonal agenda setting process starts where the production work occurs: the farm gate.

In mutual agenda setting process the upper echelons of the bureaucracy would be responsible for their true mission: how to meet the necessary resource requirements of the field to increase the agricultural production. Instead of setting its own agenda the core would be working on an agenda that organically stems from the real needs of the farmers. In this kind of agenda setting the communication between the core and the peripheries would be based on understanding. In a two-way mode the core and the peripheries would communicate in a coorientational state to understand the problems faced and assess the potentialities together. The core and the peripheries may not agree on every issue. But they would accurately understand their disagreements.

In Pakistan the shift on agenda setting from the core to the peripheries for the seasonal production plans is desirable. Presently the field staff are serving as conveyor belts to pass the prepared packages to farmers. Their work is seen as one of "persuasion" rather than cooperation in a learning process. But it is not working. The job burnout among the field staff is in almost epidemic proportions. They are in a psychological disarray. In such a state they self-admittedly are not being helpful to farmers.

The second group to work with farmers in preparation of the seasonal agenda will be the field representatives of the private agricultural sector. It is a common sense cooperation which already exists.⁶ However, as the private sector representatives indicate in Chapter VI of this report, presently there is no systematic collaboration between farmers and the private sector. The big manufacturers in the private sector are also operating in a vacuum without fully understanding the realities of the field. Their communication mechanism has loops in it. The loops that people in the peripheries use to their advantage. The result is the abuse and misuse of the farmer's trust by those who take advantage of the chaotic situation in the peripheries of the private sector.

Presently farmer's need to utilize the closest markets places them under the monopoly of a few input outlets. Same problem also occurs in marketing the crops. Thus, without much competition, the private sector can manipulate both the input and output markets. The mutual agenda setting process places the private sector as a legitimate partner in agricultural production planning. However, the changes in the modus operandi of the private sector are also necessary if the mutual agenda setting process to work in a just equilibrium.

The farmers in the agenda setting troika are the clients of public sector and the customers as well as the suppliers of the private sector. They do hold the most pivotal position in the proposed troika. Without their patronage the public and private sectors would be dormant. However, due to socio-economic-political circumstances, presently the farmers constitute the largest silent majority in Pakistan. The articulation of farmer's needs is in the monopoly of those who are already usurping the farmers' rights. If the mutual agenda setting process is going to be taken seriously the farmers of Pakistan have to have a genuine voice in their business affairs. The producers of goods should have a say in the production of goods. It is one of the most commonsensical notions that is lost to many government/private organizations around the world. The consequences are often disastrous. The mutual agenda setting proposal is one of the options to avoid such disasters.

The farmers in Pakistan presently do not have a viable formal organization to collaborate with the other members of the proposed troika in the mutual agenda setting process. The Water Users Associations, organized under a project a few years ago, are not truly farmer organizations. They were formed by provincial governments and have no genuine roots in the farming communities to be able to cope with the vigors of the mutual agenda setting process. As seen by most farmers, Their utility is over as soon as the canals are lined. The attempts to establish federation of Water Users Associations would prove futile because a still born social organization cannot be made viable by cosmetics.

The discussion of the mutual agenda setting process above leads me to the most delicate task of this report: What to do next? As one donor agency official said "When I

was reading the draft of your report. I kept asking: what are his prescriptions?" It is a legitimate question in his official position. But the question also makes me wish that I had studied medicine instead of social sciences. If I were a physician it would be easy for me to say: "first take, etc." But in my field of interest the things do not work that way. In fact to be prescriptive is considered dangerous by some in my field. It would place me with those "who know everything" and "have their prescriptions ready." To me such an attitude is arrogant, insensitive and against the grains of my beliefs. In the last forty years prescriptive change advocates caused so much hardship to so many and so needlessly in low income countries.⁹ I am not an advocate of prescribed change.

However, I do have a suggestion for a program which may help those members in the proposed troika to develop the guiding principles of mutual agenda setting process. It is a program where the participants learn from each other's experiences and knowledge to share the responsibilities of the mutual agenda setting process. The program demands commitment, self-discipline and above all humility to accept each and every participant as a source of knowledge which would contribute to the attainment of the program's goals. If a serious commitment is made by the members of the proposed troika such a program could be launched within a convenient time frame.

D. AN OUTLINE FOR THE DEVELOPMENT OF MUTUAL AGENDA SETTING PROGRAM IN PAKISTAN: PHASE III OF THE COMMUNICATION MANAGEMENT STUDIES

The mutual agenda setting process starts in the field therefore the proposed program should also be initiated in the field. An action research with a general framework should be launched at tehsil level. The essential components of the action research are outlined in Figures 3 and 4. The following, then, is an outline for the program:

1. The location:

It would be socio-psychologically logical to select a site for the action research outside of the sub-projects of the Command Water Management Projects. The presently existing administrative procedures at these sub-projects would contaminate the process of the action research.

2. The budgeting:

The proposed action research is not a blue-print project. There is no need for a large scale and costly undertaking. The reliance on the outside participants by the members of the troika has to be kept at minimum. Because the mutual agenda setting process has to be self-generated and self-sustained. The emphasis is on the local talent and know-how. If the people are not interested to create, sustain, and expand their own program, then the need for it is not genuine. However, the program is focused on institutional building and requires time. At least two full cultivation seasons, if not longer, should be devoted to the implementation of the action research. Because of the deliberate pace of the proposed action research it would be more convenient to make arrangements with

research foundations instead of governmental donor agencies. However, if the arrangements are to be made with such agencies an understanding on the nature of the action research needs to be established in the beginning not to cause hardships to participants. Because there are no quick results in action research.

3. The staff recruitment:

As one GOP official wisely proposed, the participants in the action research need to be more Renaissance types than technical specialists. "Because," the official said "the technical people will narrow the scope of the work into their expertise. On the other hand the Renaissance types will provide the necessary breath." I agree. The technical assistance can be obtained whenever the needs arise but the imagination and creativity will be the most needed attributes in the proposed undertaking.

4. The procedure:

- a. The public and private sectors should neither dominate nor dictate in the action research process. They should simply participate.
- b. The funds allocated to the research should not be under the control of a GOP public sector organization. A voluntary organization should handle the funds under the supervision of comptrollers jointly appointed and approved by the GOP and the donor agency involved. Later when the farmer's organizations are formed they should participate jointly in controlling the funds.
- c. Farmers should decide the form, the legal responsibilities, objectives and membership of their organization. The other members of the troika should work with the farmers after these

- organizations are formed.
- d. The modern media techniques (i.e. videotape recorders, mobile video units, etc.) should be used for record keeping and assessing the activities of the action research. This would allow the participants to review the past actions conveniently and speed the learning process. After initial period the farmers and other participants should be trained to use the media equipment.
 - f. Periodic meetings should be held with concerned GOP officials and donor agency personnel with the members of troika to discuss the activities past. These meetings should not be in the form of reporting to a superior body. Rather the meetings should be an extension of the participatory action to the parties involved in funding.
 - g. The recommendations that emerge from the workings of the troika should be forwarded to the appropriate public and private sector agencies for their reactions. The representatives of these agencies should then join the troika to discuss further the potential for the implementation of the recommendations. The joint decisions made in these discussions should be implemented by the concerned organizations.

The above items are the basics to initiate the mutual agenda setting process. They are rather descriptive than prescriptive. They also are subject to change, modification and rejection. After all the process is participatory and my suggestions are strictly that: mine. If the process appeals to those concerned their suggestions would be more than welcome. In fact the suggestions from troika at any level would be desirable.

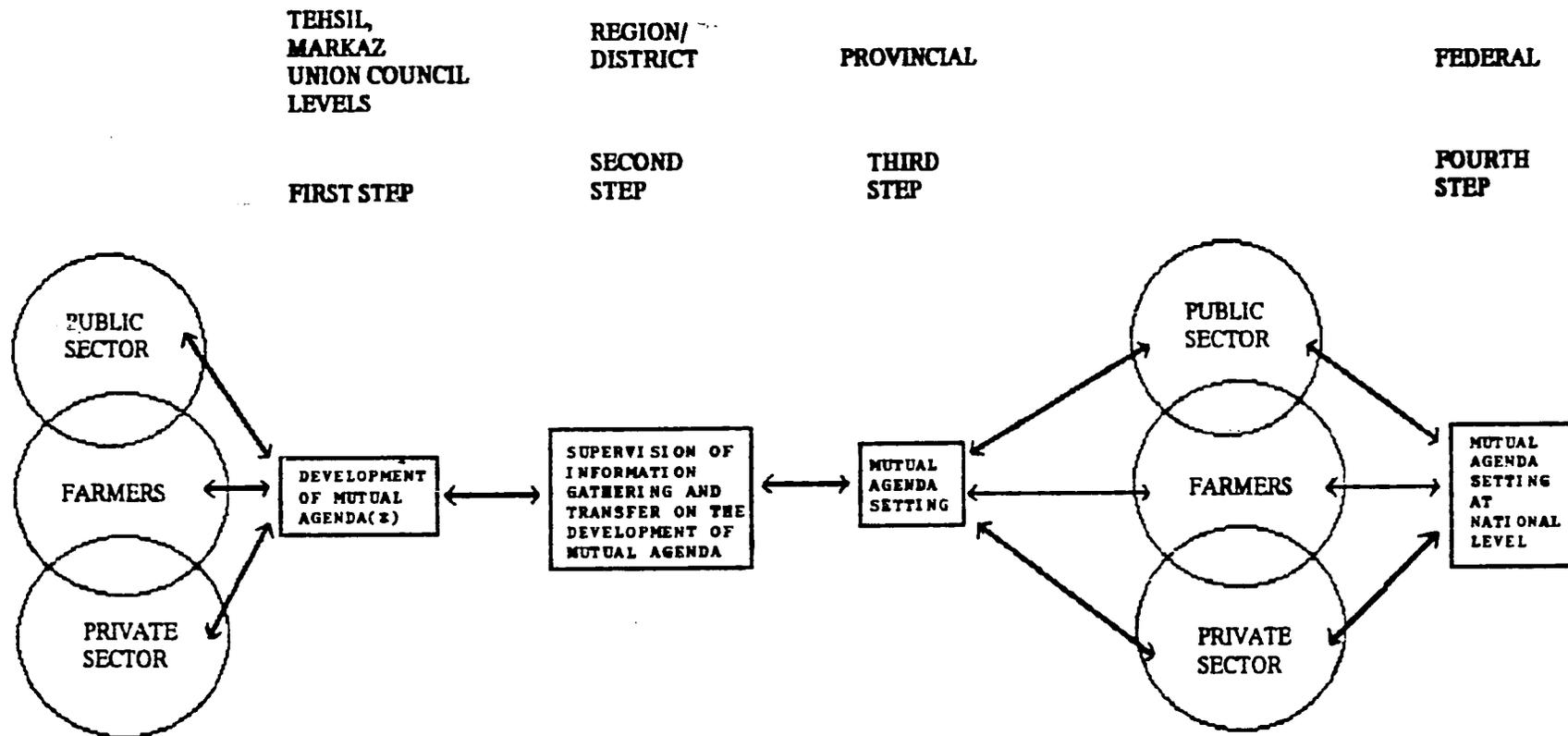


Figure 3.

PROPOSED FLOW CHART OF COMMUNICATION ON MUTUAL AGENDA SETTING

(*) Please refer to Figure 4 for agenda setting process

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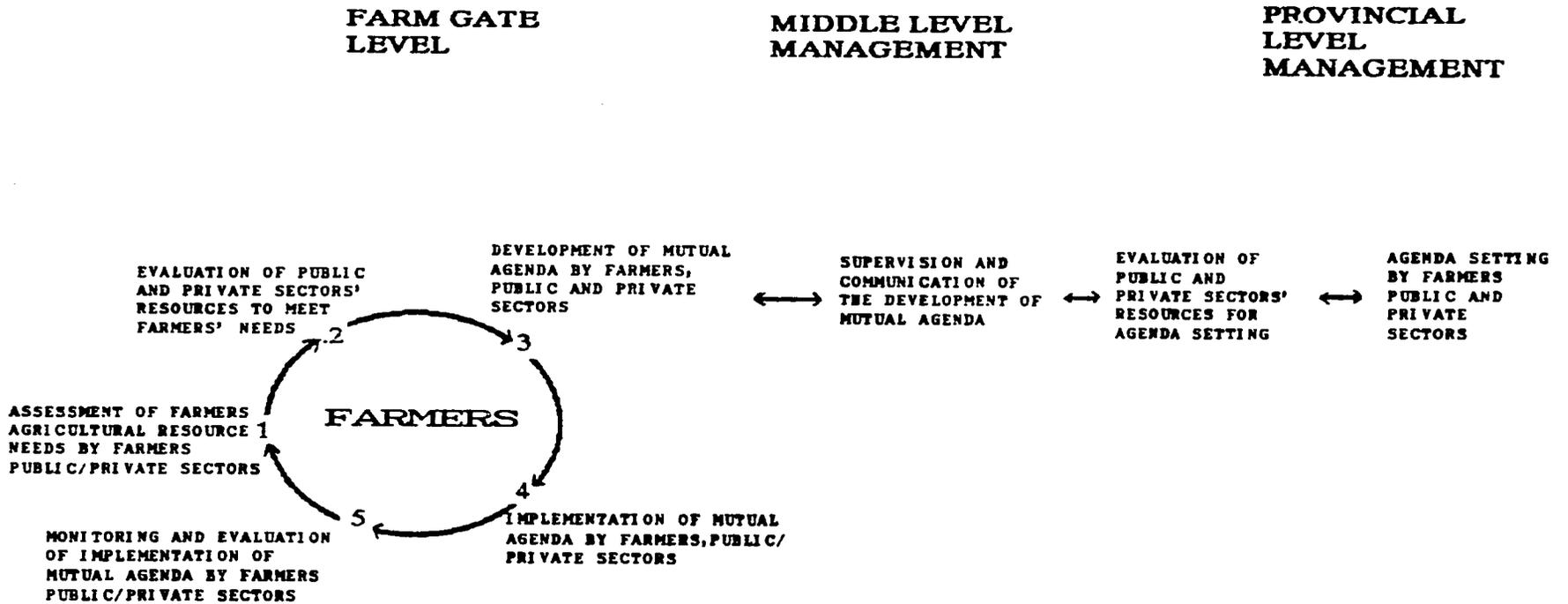


Figure 4.

FARMER-ORIENTED SEASONAL AGENDA SETTING PROCESS

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NOTES

1. Oguz B. Nayman. "Seekers of Light" -- Information-Seeking Habits of Farmers: An Exploratory Survey, Punjab, Pakistan, USAID Report, 1988. p.10.
2. John Kenneth Galbraith. "Why the Right is Wrong," The Pakistan Times February 1-2, 1990.
3. Galbraith. Ibid.
4. Galbraith. Ibid.
5. Mervyn L. Cadwallader. "The Cybernetic Analysis of Change," (in) Modern Theories, nd, pp.159-164.
6. Galbraith. op.cit.
7. Galbraith. Ibid.
8. Nayman. op.cit. Table 29, p.56.
9. Nayman. Ibid. Chapter I.

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APPENDIX A
TABLES AND BAR CHARTS
REPRESENTING
DATA IN
CHAPTER IV

TABLES
A-1, A-2, & A-3
JOB SATISFACTION

EVALUATION OF OFFICIAL SOURCES OF AGRICULTURAL INFORMATION

TABLE- A-1

JOB SATISFACTION

S.No.	Description	General Mean (4 point value)
1.	I think that I have a real chance to get ahead in my department	1.91
2.	The best qualified people are usually chosen for promotion in the department I work for	2.25
3.	I am satisfied with my pay and benefits	2.27
4.	My department has a genuine concern for the welfare (working conditions, living conditions, etc.) of its employees	1.95
5.	My department provides me with all the necessary resources (on-the-job training, educational support material, transportation etc.) that can assist me in doing my job well	2.55
6.	I am satisfied with my day-to-day working conditions	2.82
7.	I am satisfied with the recognition I receive for good performance in my job (promotions, honorarium, etc.)	2.43

1= Highly Disagree, 2= Disagree, 3= Agree, 4= Highly Agree

EVALUATION OF OFFICIAL SOURCES OF AGRICULTURAL INFORMATION

TABLE- A-2

JOB SATISFACTION

S.No.	Description	Job Type Mean (4 point value)	
		Field Staff	Office Staff
1.	I think that I have a real chance to get ahead in my department	1.77	2.12
2.	The best qualified people are usually chosen for promotion in the department I work for	2.18	2.37
3.	I am satisfied with my pay and benefits	2.16	2.43
4.	My department has a genuine concern for the welfare (working conditions, living conditions, etc.) of its employees	1.91	2.00
5.	My department provides me with all the necessary resources (on-the-job training, educational support material, transportation etc.) that can assist me in doing my job well	2.48	2.65
6.	I am satisfied with my day-to-day working conditions	2.83	2.81
7.	I am satisfied with the recognition I receive for good performance in my job (promotions, honorarium, etc.)	2.36	2.53

1= Highly Disagree, 2= Disagree, 3= Agree, 4= Highly Agree

EVALUATION OF OFFICIAL SOURCES OF AGRICULTURAL INFORMATION

TABLE- A-3

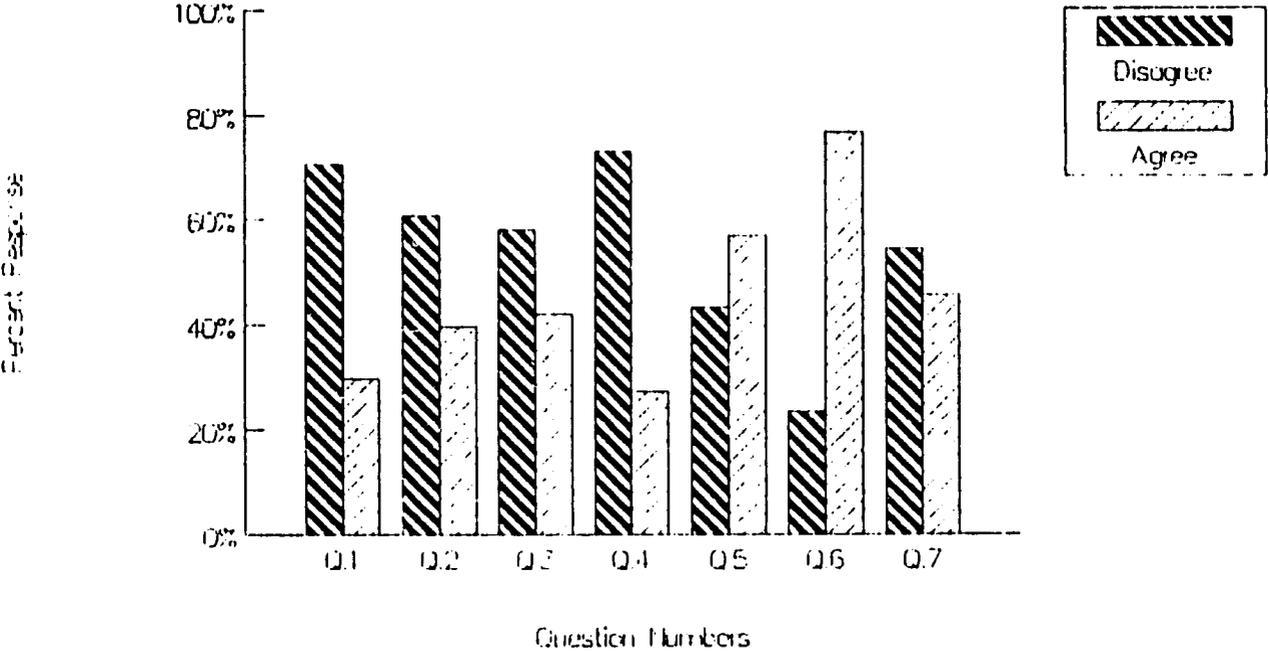
JOB SATISFACTION

S.No.	Description	Length of Service Mean (4 point value)		
		1-9yrs	10-20yrs	>20 yr
1.	I think that I have a real chance to get ahead in my department	2.03	1.94	1.81
2.	The best qualified people are usually chosen for promotion in the department I work for	2.51	2.41	2.00
3.	I am satisfied with my pay and benefits .	2.40	2.58	2.02
4.	My department has a genuine concern for the welfare (working conditions, living conditions, etc.) of its employees	1.92	2.35	1.78
5.	My department provides me with all the necessary resources (on-the-job training, educational support material, transportation etc.) that can assist me in doing my job well	2.51	2.52	2.59
6.	I am satisfied with my day-to-day working conditions	2.85	2.88	2.78
7.	I am satisfied with the recognition I receive for good performance in my job (promotions, honorarium, etc.)	2.74	2.52	2.16

1= Highly Disagree, 2= Disagree, 3= Agree, 4= Highly Agree

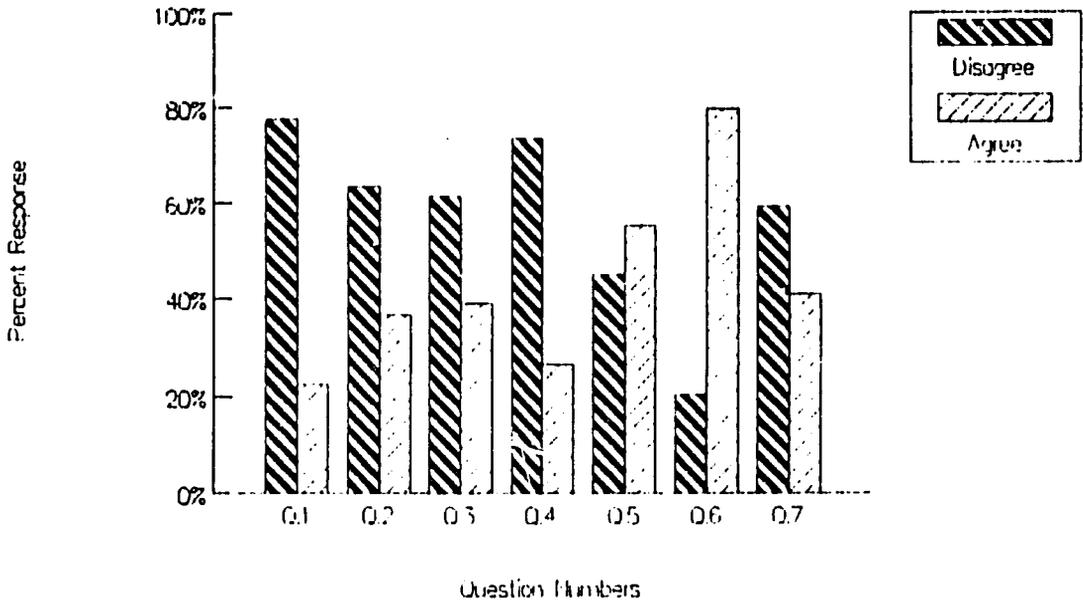
JOB SATISFACTION

Overall (N = 81)



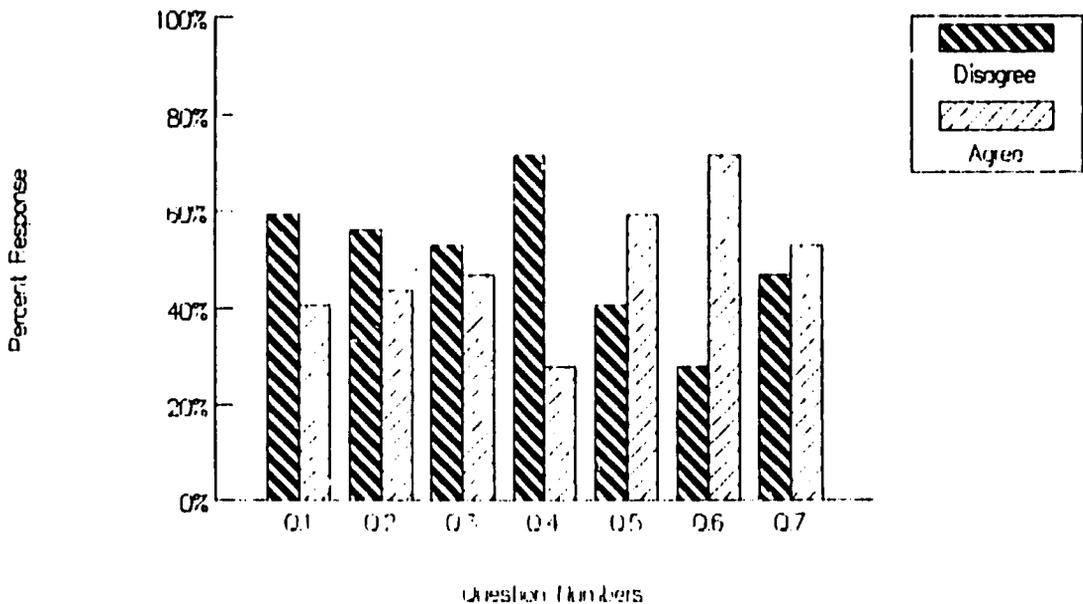
JOB SATISFACTION

Field Staff (N = 49)



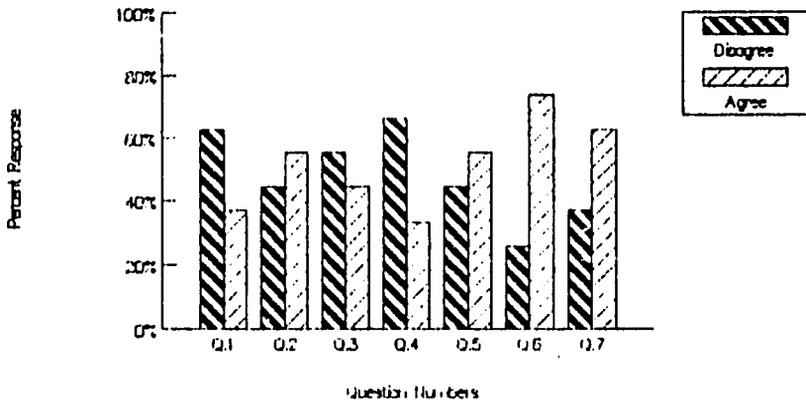
JOB SATISFACTION

Office Staff (N = 32)

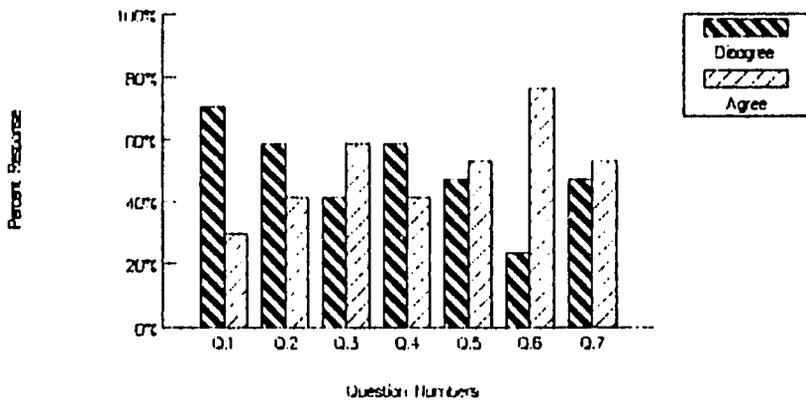


JOB SATISFACTION

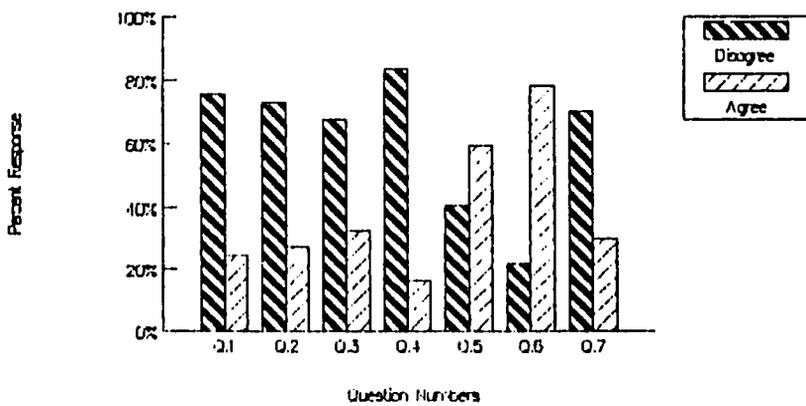
1-9 Yrs Service (N = 27)



10-20 Yrs Service (N = 17)



> 20 Yrs Service (N = 37)



TABLES

A-4, & A-5

PERCEPTION OF ORGANIZATIONAL STRUCTURE

EVALUATION OF OFFICIAL SOURCES OF AGRICULTURAL INFORMATION

TABLE- A-4

JOB PERCEPTION

S.No.	Description	General Mean (3 point value)
1.	Decision making is limited to top administrators.....	1.12
2.	Independence (Autonomy) in making decisions by the employees on the job.....	2.47
3.	Clear and recognized differences between superiors and subordinates.....	1.53
4.	Difficulty of mobility (promotion) from lower to higher ranks.....	1.27
5.	Percentage of rules and procedures specified in writing (what to do and how to do it).....	1.71
6.	Degree of control (supervision) to make sure that employees operate according to rules and procedures specified by the department.....	1.71

1 = High, 2 = Medium, 3 = Low

EVALUATION OF OFFICIAL SOURCES OF AGRICULTURAL INFORMATION

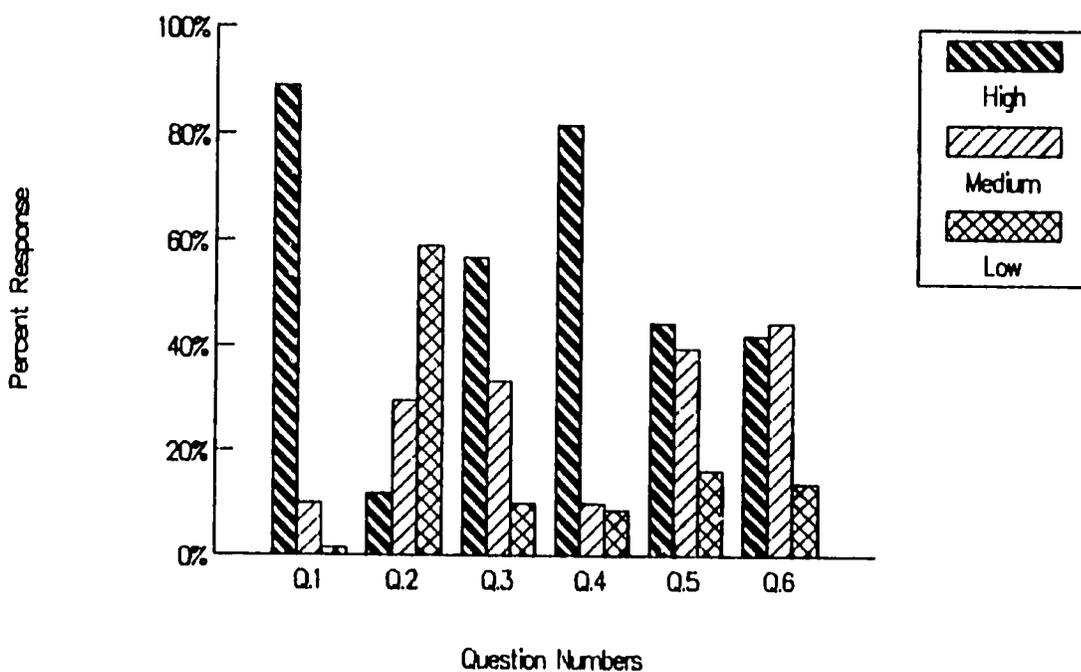
TABLE- A-5

JOB PERCEPTION

S.No.	Description	Job Type Mean (3 point value)	
		Field Staff	Office Staff
1.	Decision making is limited to top administrators	1.02	1.28
2.	Independence (autonomy) in making decisions by the employees on the job.....	2.54	2.37
3.	Clear and recognized differences between superiors and subordinates.....	1.38	1.75
4.	Difficulty of mobility (promotion) from lower to higher ranks.....	1.28	1.25
5.	Percentage of rules and procedures specified in writing (what to do and how to do it).....	1.61	1.87
6.	Degree of control (supervision) to make sure that employees operate according to rules and procedures specified by the department.....	1.63	1.84

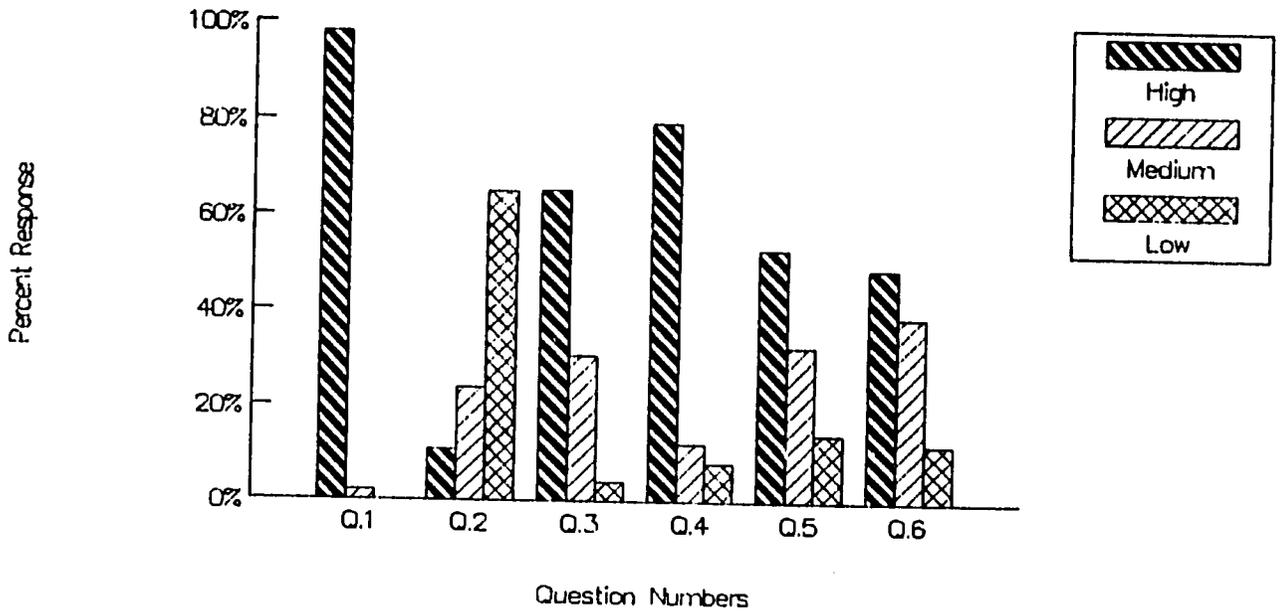
1 = High, 2 = Medium, 3 = Low

PERCEPTION OF ORGANIZATIONAL STRUCTURE – Overall (N = 81)

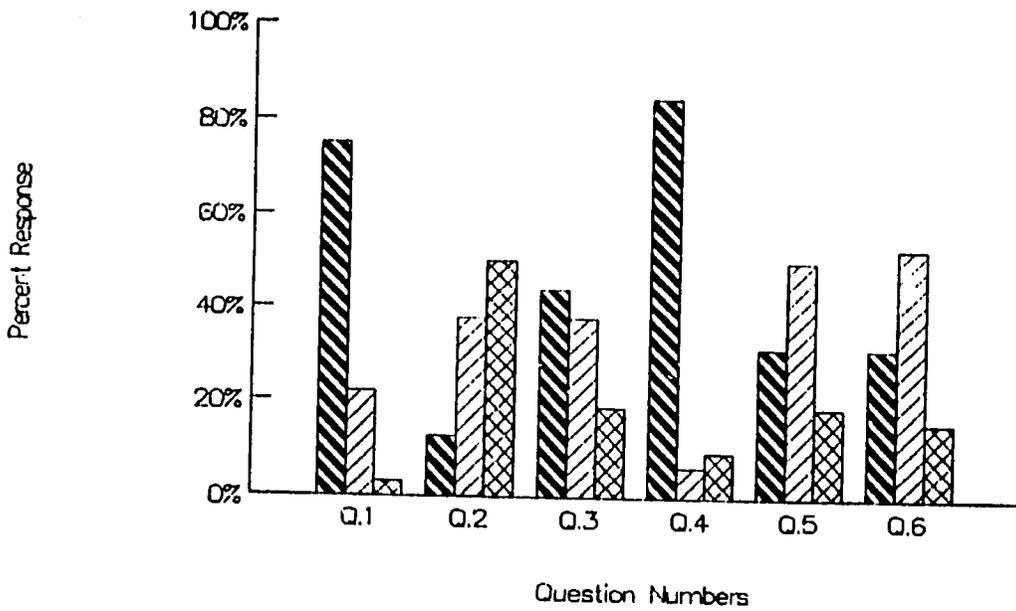


JOB PERCEPTION

Field Staff (N = 49)

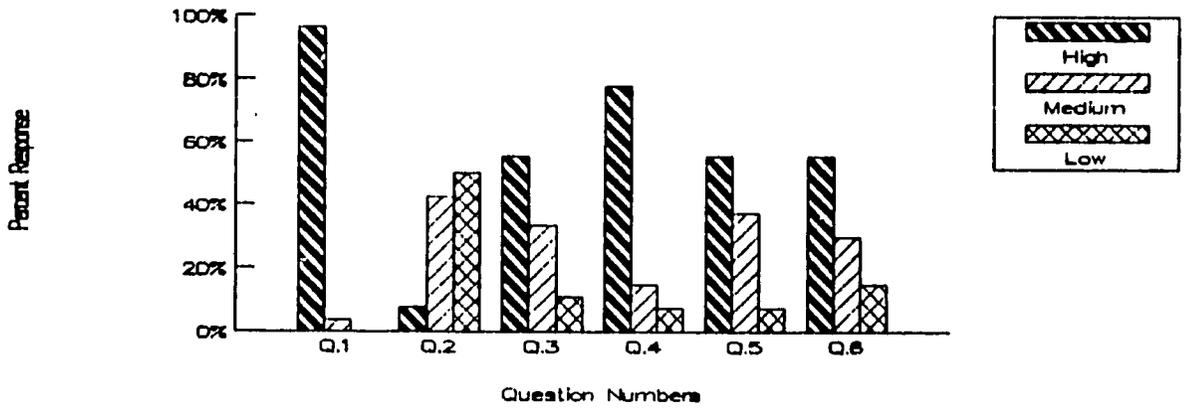


Office Staff (N = 32)

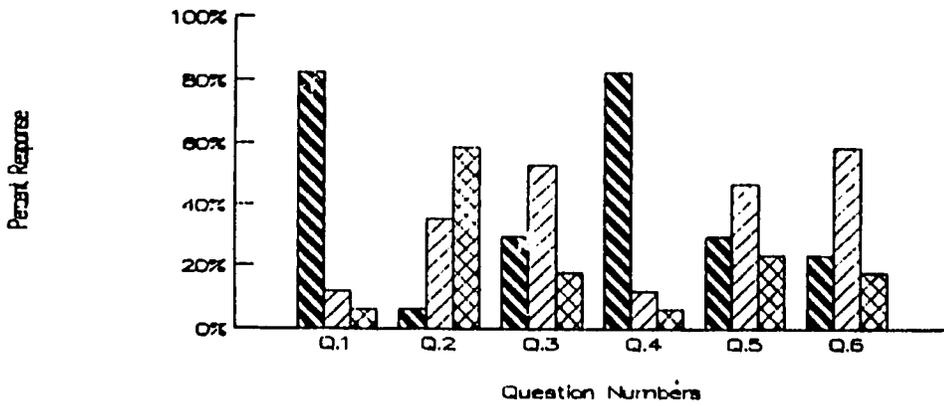


JOB PERCEPTION

1-9 yrs Service (N = 27)



10-20 yrs Service (N = 17)



> 20 yrs Service (N = 37)

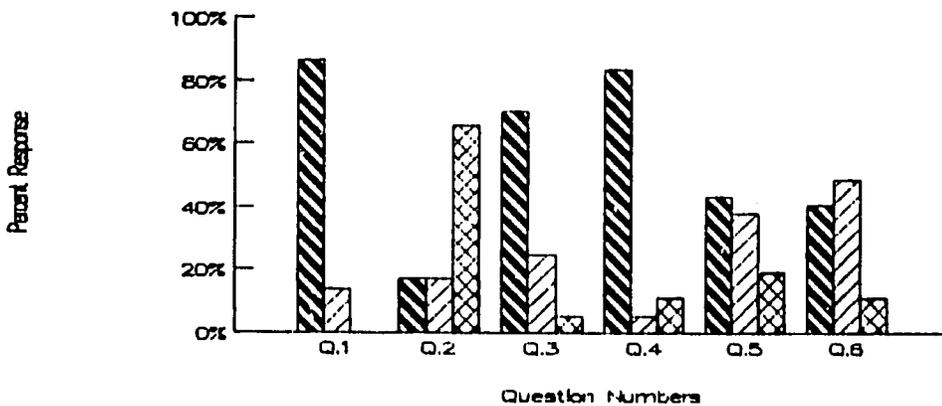


TABLE A-6

PROBLEM RECOGNITION

EVALUATION OF OFFICIAL SOURCES OF AGRICULTURAL INFORMATION

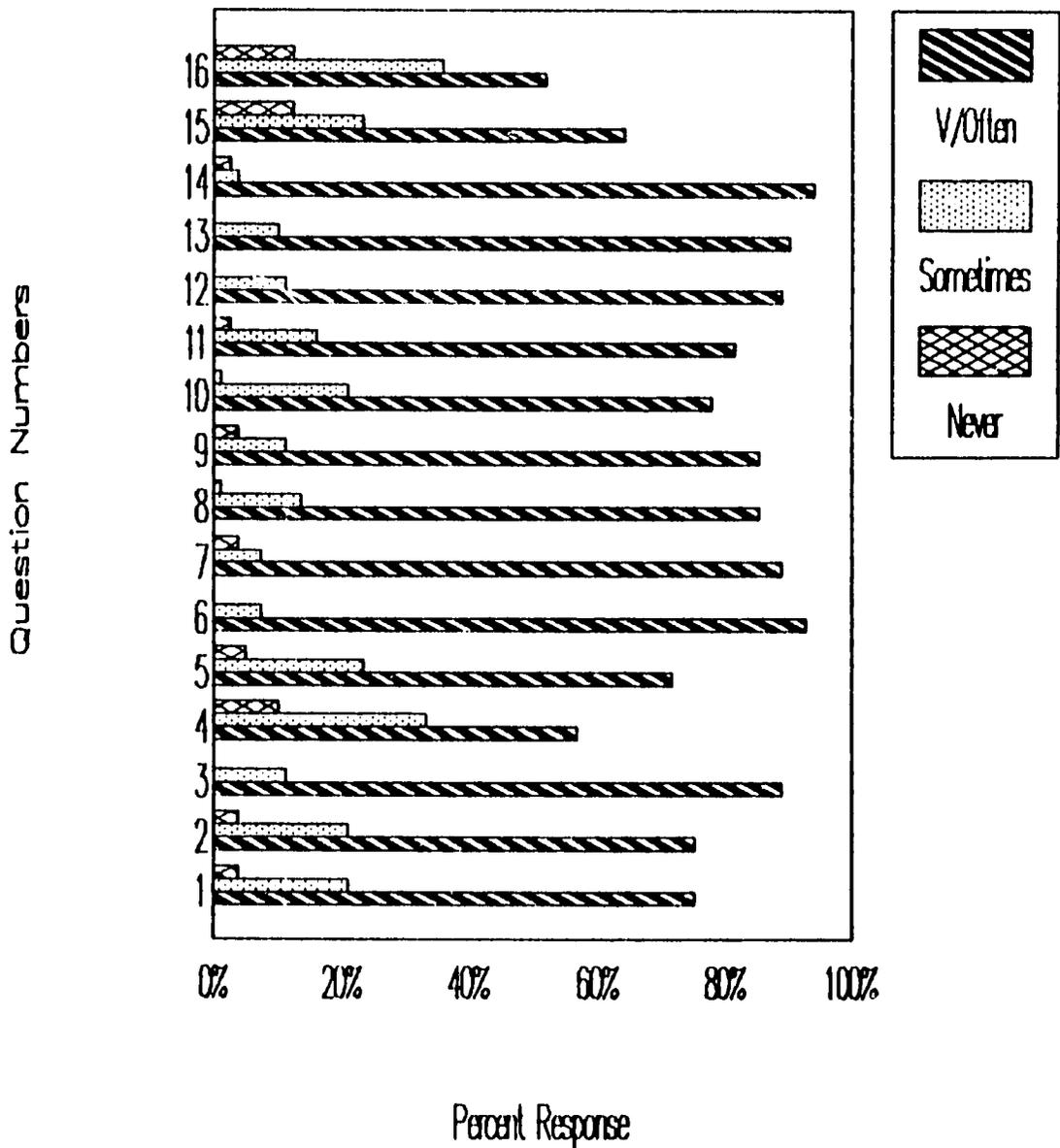
TABLE- A-6 PROBLEM RECOGNITION

S.No.	Description	General Mean (4 point value)
	I TAKE TIME TO THINK ABOUT ..	
1.	New ideas originating from local agricultural communities.....	2.04
2.	Management decisions that affect (influence) your job.....	1.93
3.	How well your clients (Farmers) understand the services provided by your department.....	1.76
4.	About agricultural matters related to Pakistan.....	2.29
5.	About agricultural matters related to Punjab.....	2.03
6.	About agricultural matters related to your jurisdiction (working area).....	1.45
7.	Making a valuable achievement in your job.	1.59
8.	New ideas originating from agricultural research.....	1.83
9.	Working conditions in your job.....	1.79
10.	Farmer participation in making decisions in agricultural and water management.....	1.98
11.	Increase in agricultural production in Punjab.....	1.81
12.	New and improved agricultural technologies.....	1.65
13.	Making changes to do your job effectively.	1.58
14.	Being able to effectively communicate with farmers.....	1.56
15.	Sharing ideas with officers in similar jobs as yours in other parts of Punjab....	2.29
16.	Policy decisions made by Ministry of Agriculture/Punjab.....	2.44

1=Very Often, 2=Quite Often, 3=Sometimes, 4=Not at all

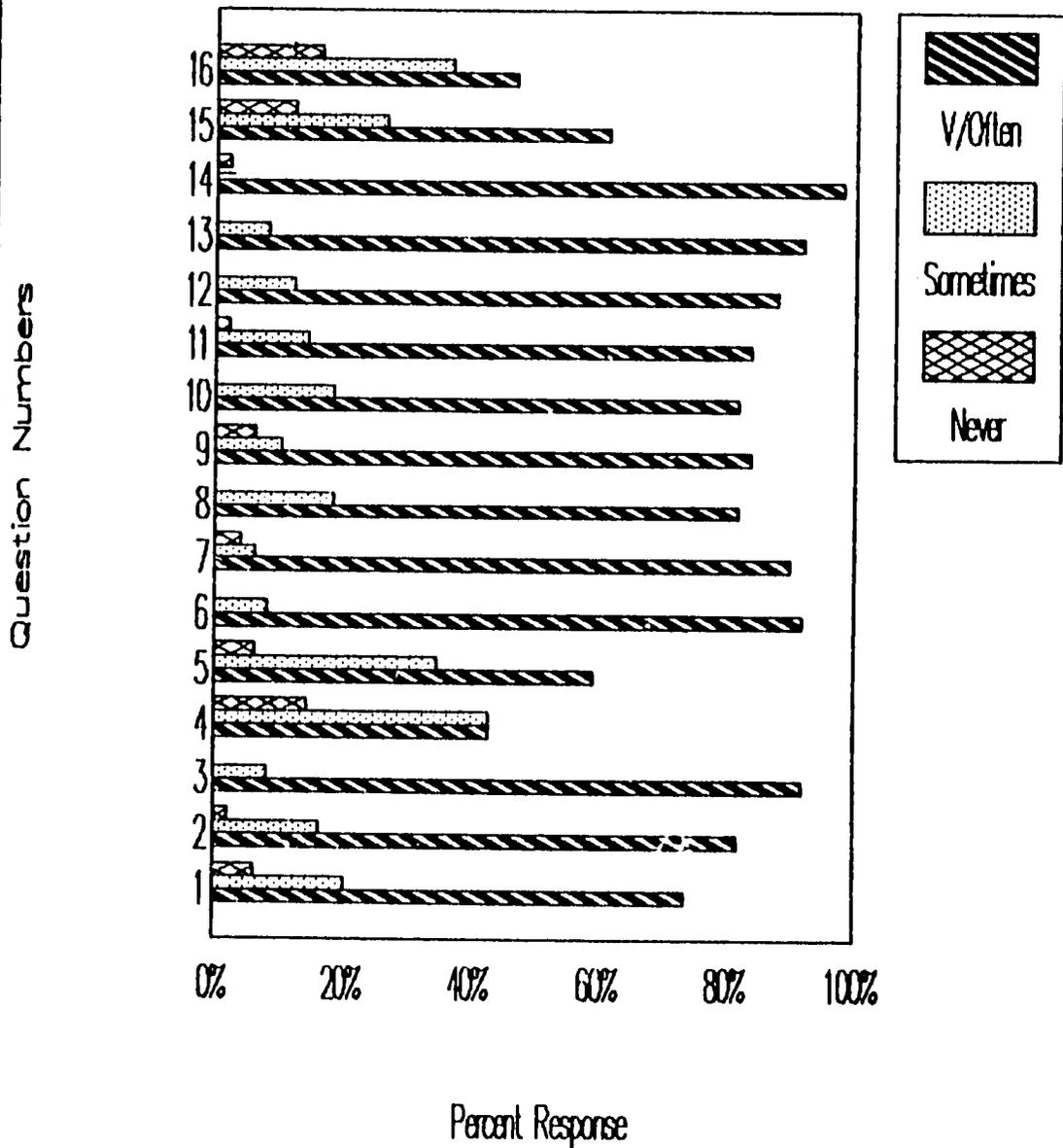
PROBLEM RECOGNITION

Overall (N = 81)



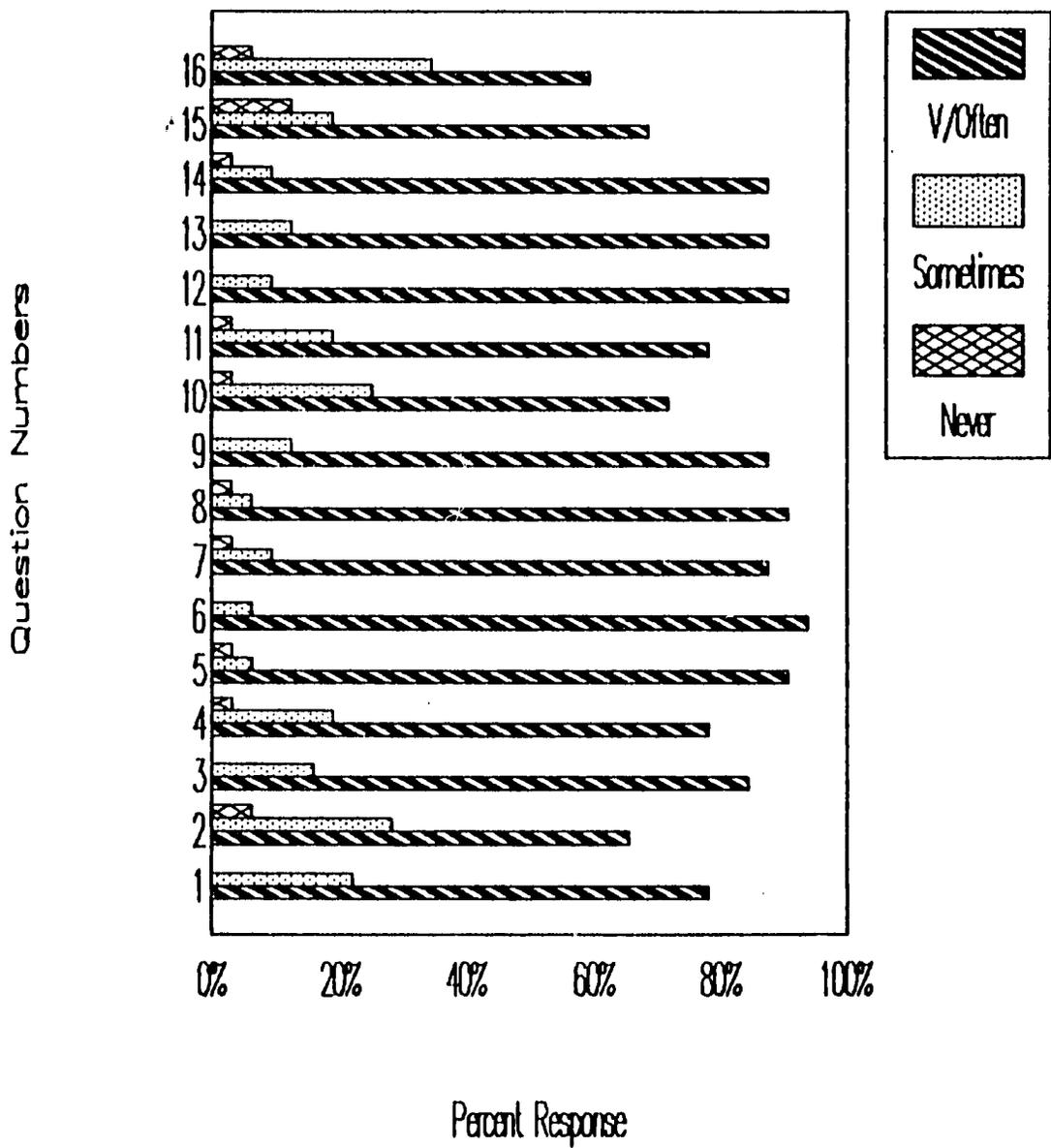
PROBLEM RECOGNITION

Field Staff (N = 49)



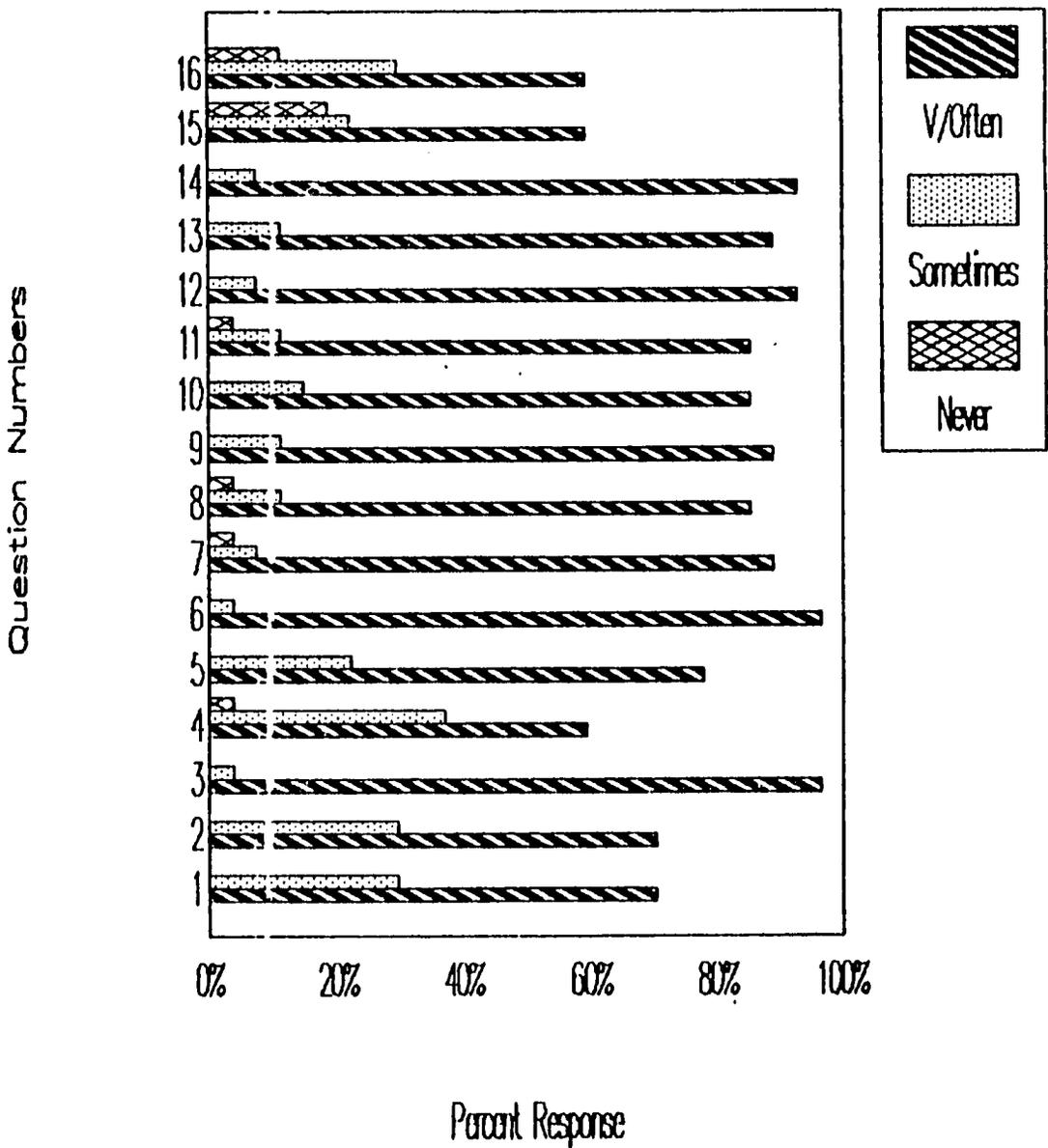
PROBLEM RECOGNITION

Office Staff (N = 32)



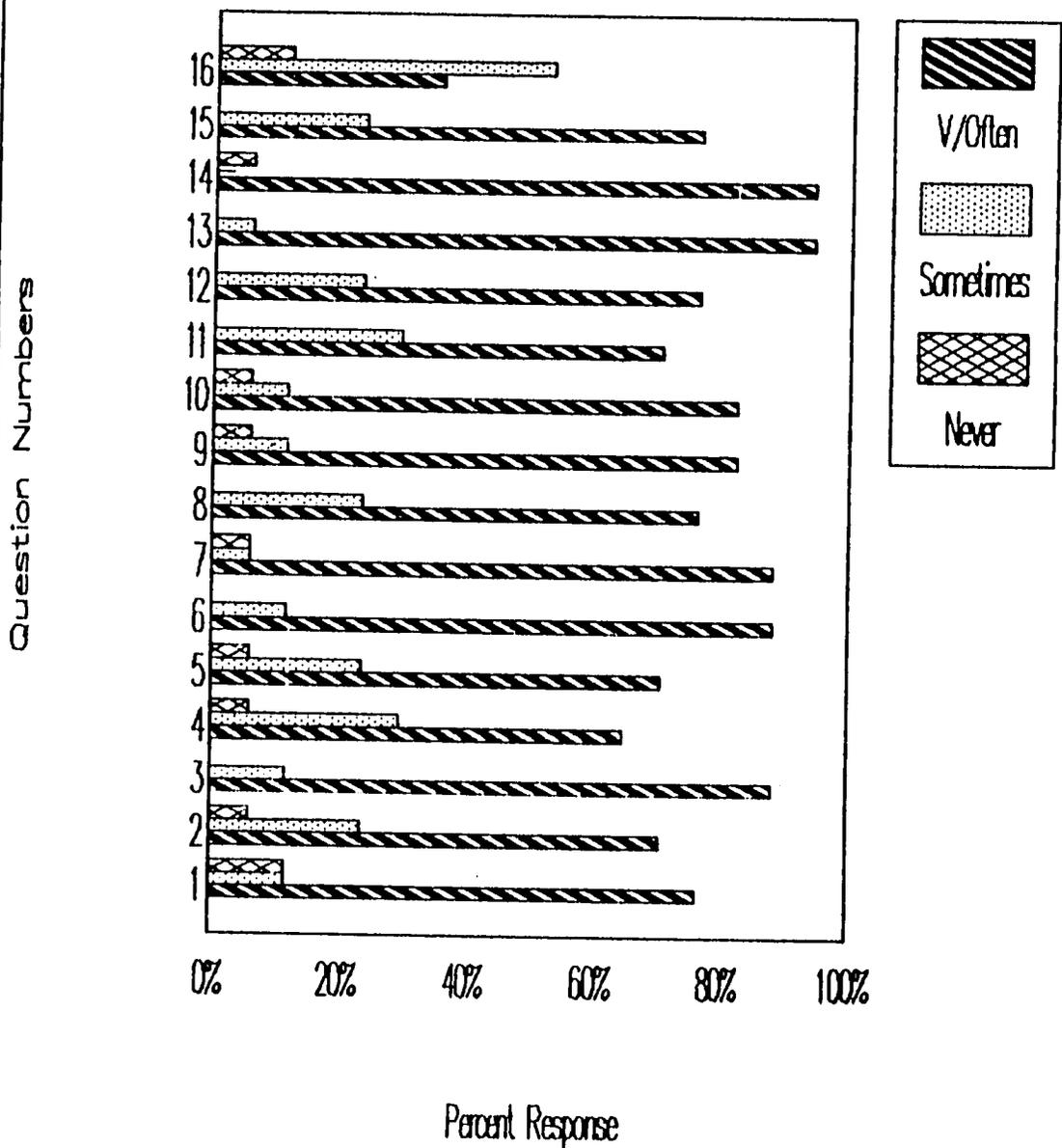
PROBLEM RECOGNITION

1-9 Yrs Service (N = 27)



PROBLEM RECOGNITION

10-20 Yrs Service (N = 17)



PROBLEM RECOGNITION

> 20 Yrs Service (N = 37)

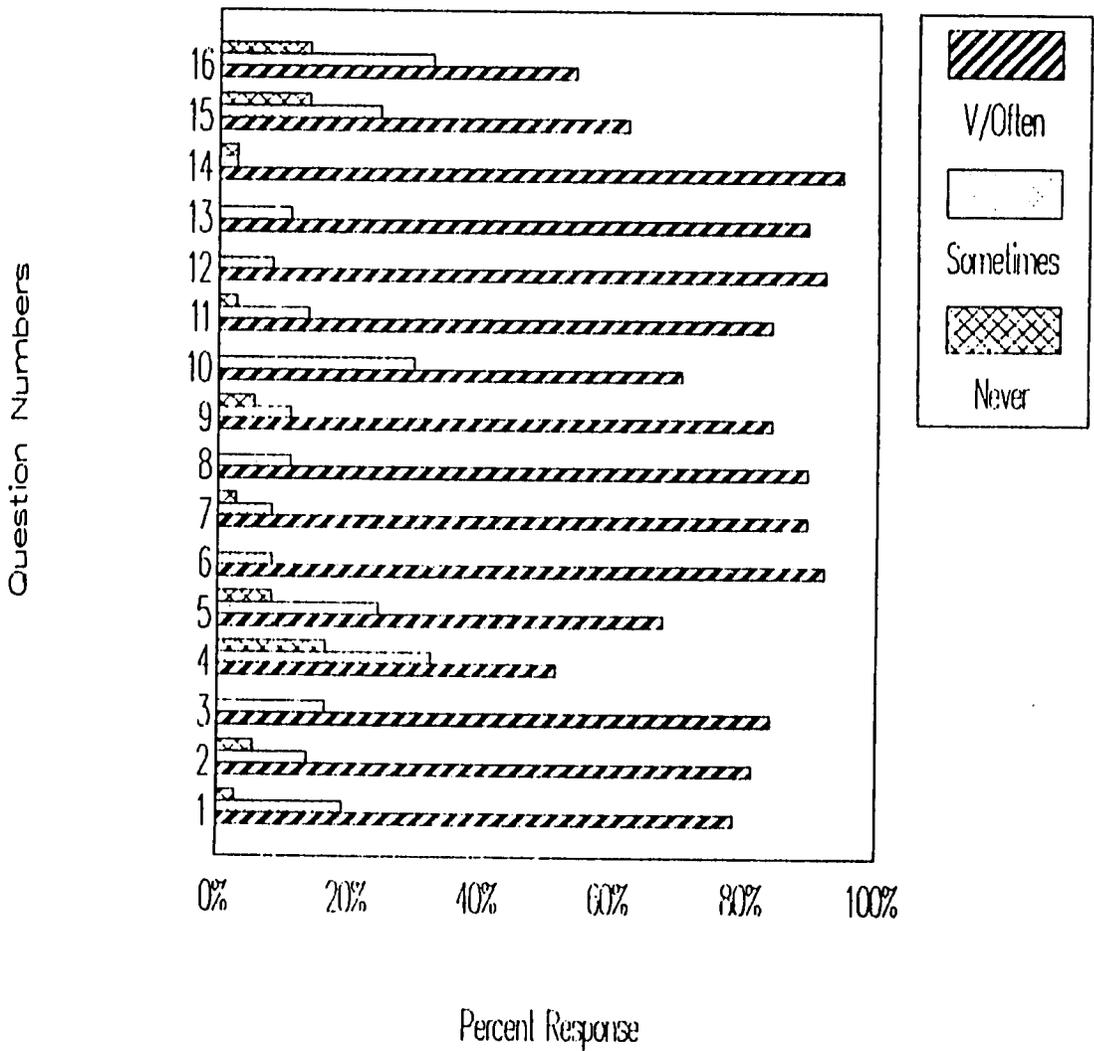


TABLE A-7

CONSTRAINT RECOGNITION

EVALUATION OF OFFICIAL SOURCES OF AGRICULTURAL INFORMATION

TABLE- A-7

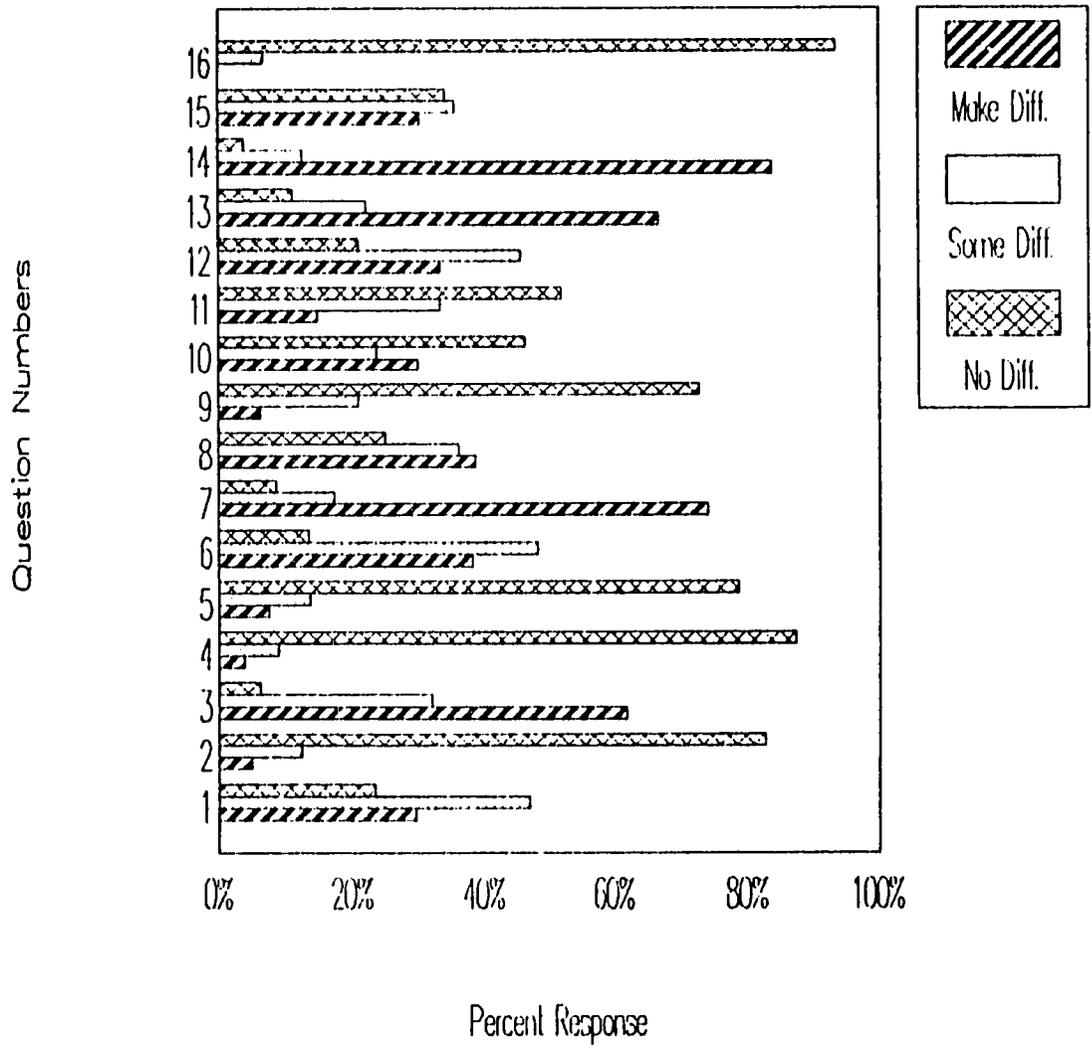
CONSTRAINT RECOGNITION

S.No.	Description	General Mean (4 point value)
I THINK I CAN MAKE ..		
1.	New ideas originating from local agricultural communities.....	2.86
2.	Management decisions that affect (influence) your job.....	3.77
3.	How well your clients (Farmers) understand the services provided by your department.....	2.22
4.	About agricultural matters related to Pakistan.....	3.83
5.	About agricultural matters related to Punjab.....	3.68
6.	About agricultural matters related to your jurisdiction (working area).....	2.60
7.	Making a valuable achievement in your job.	2.03
8.	New ideas originating from agricultural research.....	2.68
9.	Working conditions in your job.....	3.62
10.	Farmer participation in making decisions in agricultural and water management.....	3.08
11.	Increase in agricultural production in Punjab.....	3.32
12.	New and improved agricultural technologies.....	2.80
13.	Making changes to do your job effectively.	2.19
14.	Being able to effectively communicate with farmers.....	1.83
15.	Sharing ideas with officers in similar jobs as yours in other parts of Punjab....	2.93
16.	Policy decisions made by Ministry of Agriculture/Punjab.....	3.93

1=A Big Difference, 2=Enough Difference,
3=Some Difference, 4=No Difference

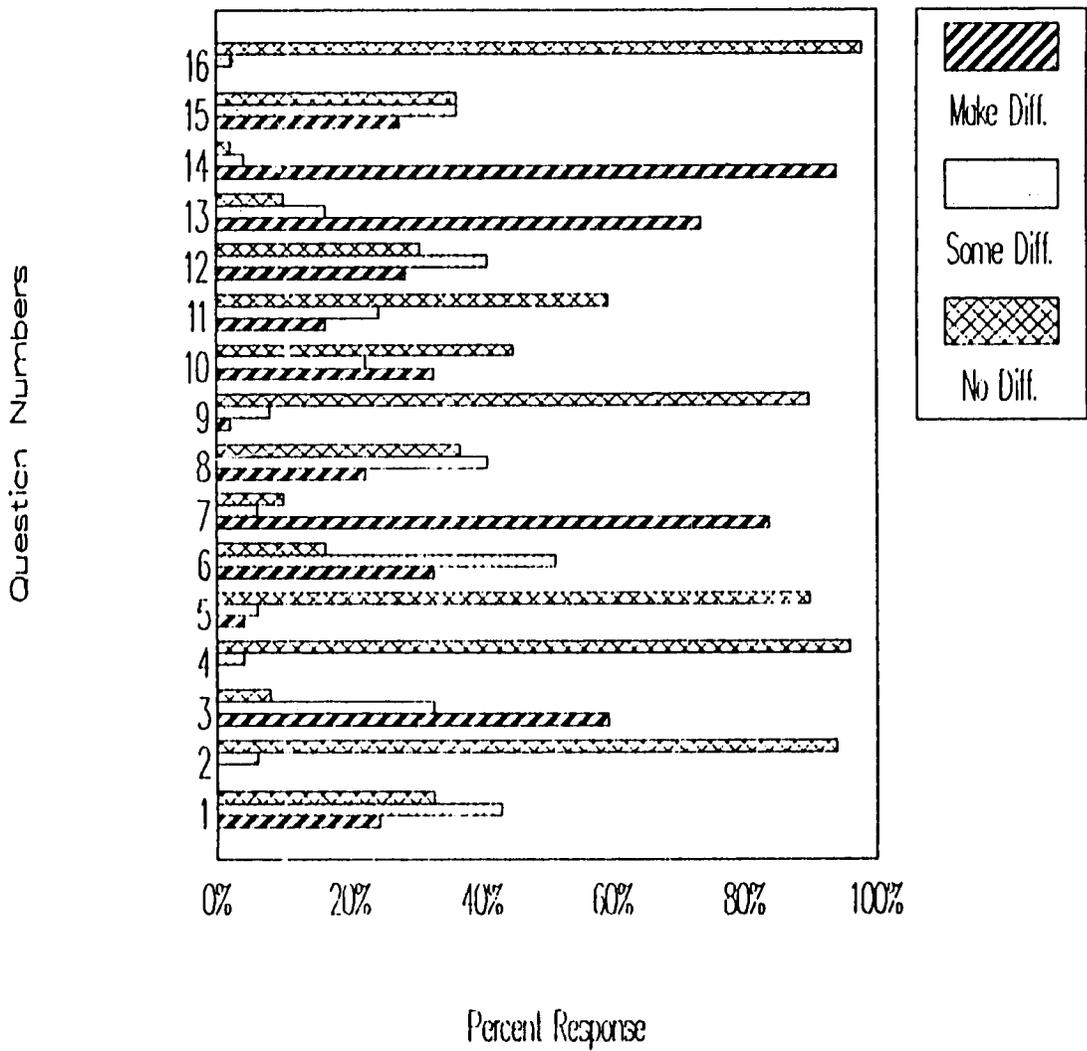
CONSTRAINT RECOGNITION

Overall (N = 81)



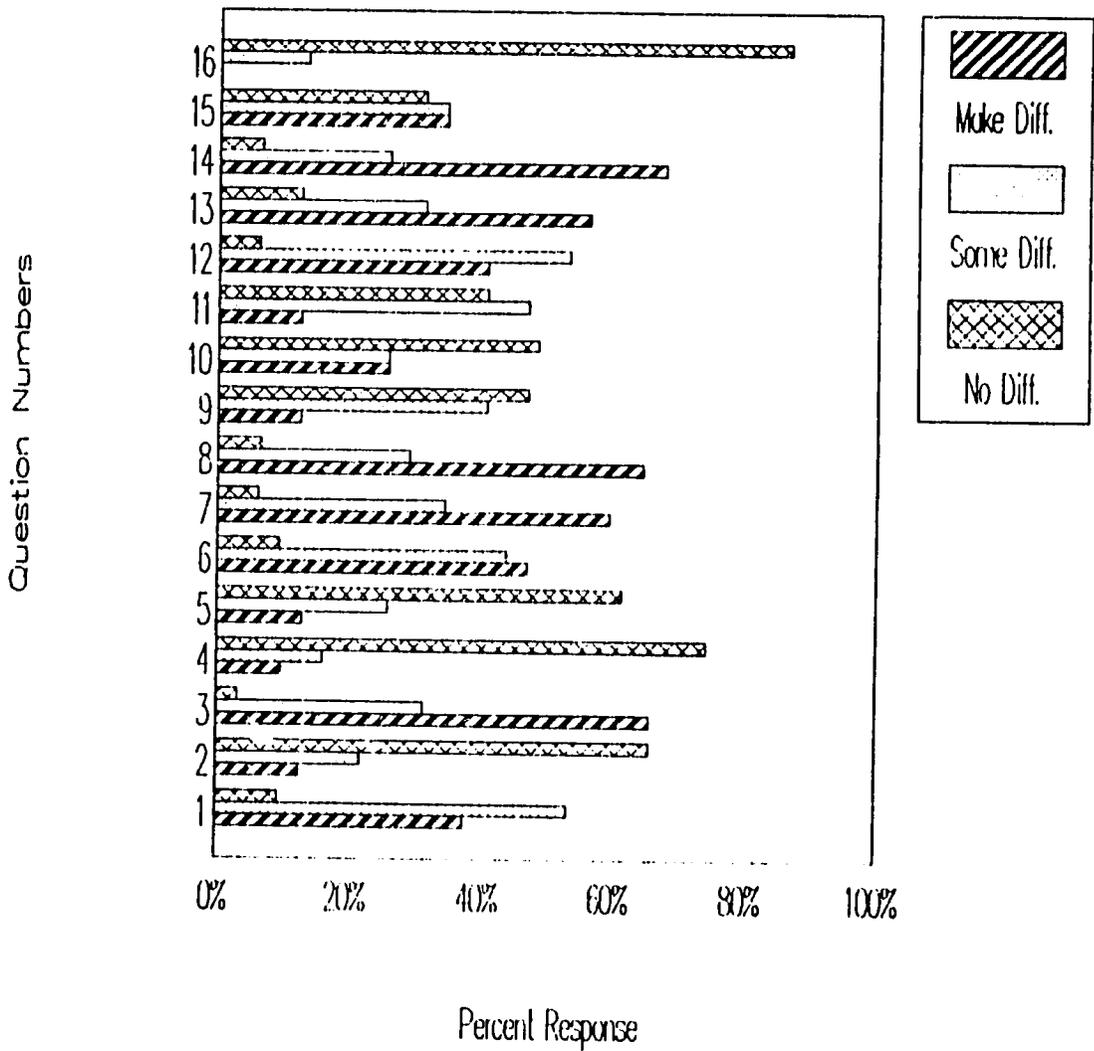
CONSTRAINT RECOGNITION

Field Staff (N = 49)



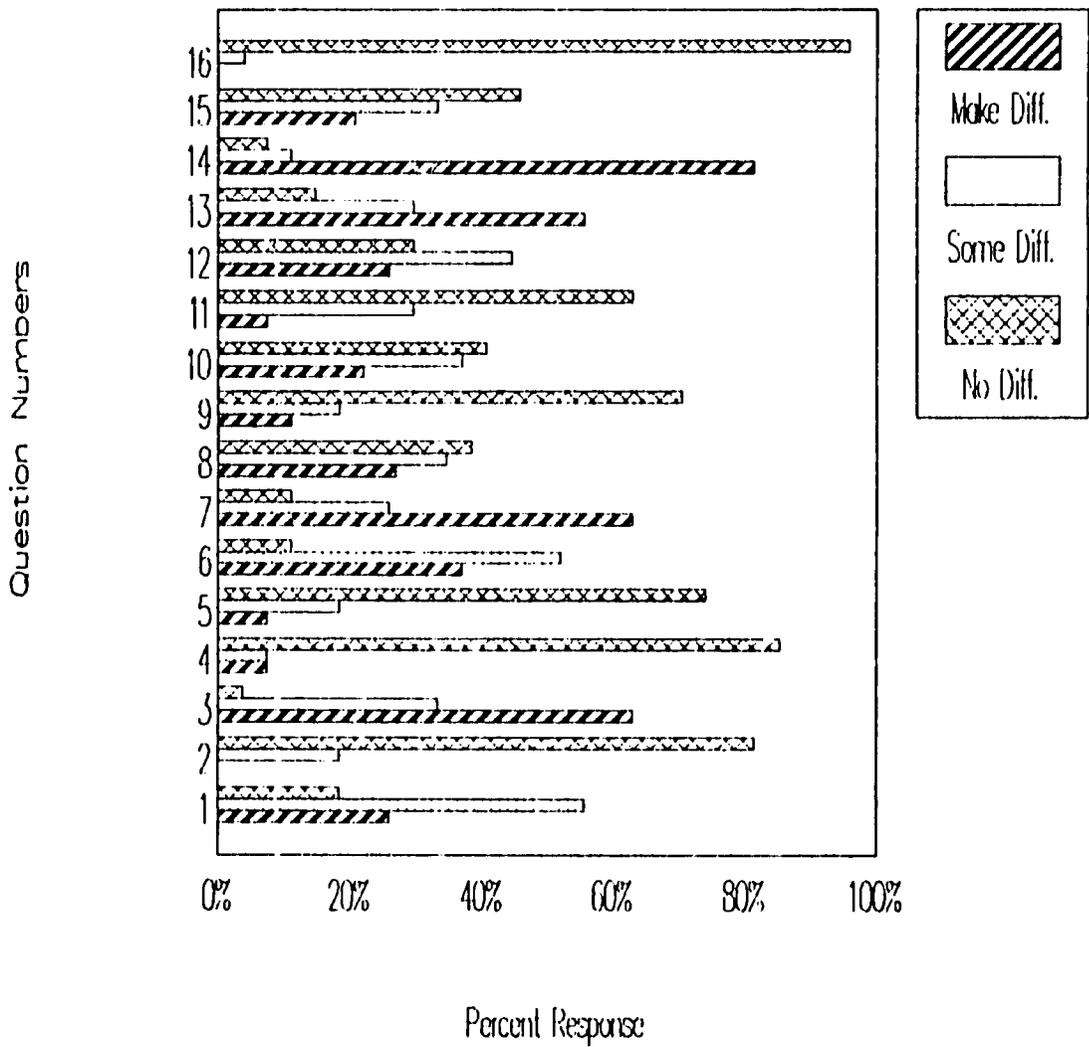
CONSTRAINT RECOGNITION

Office Staff (N = 32)



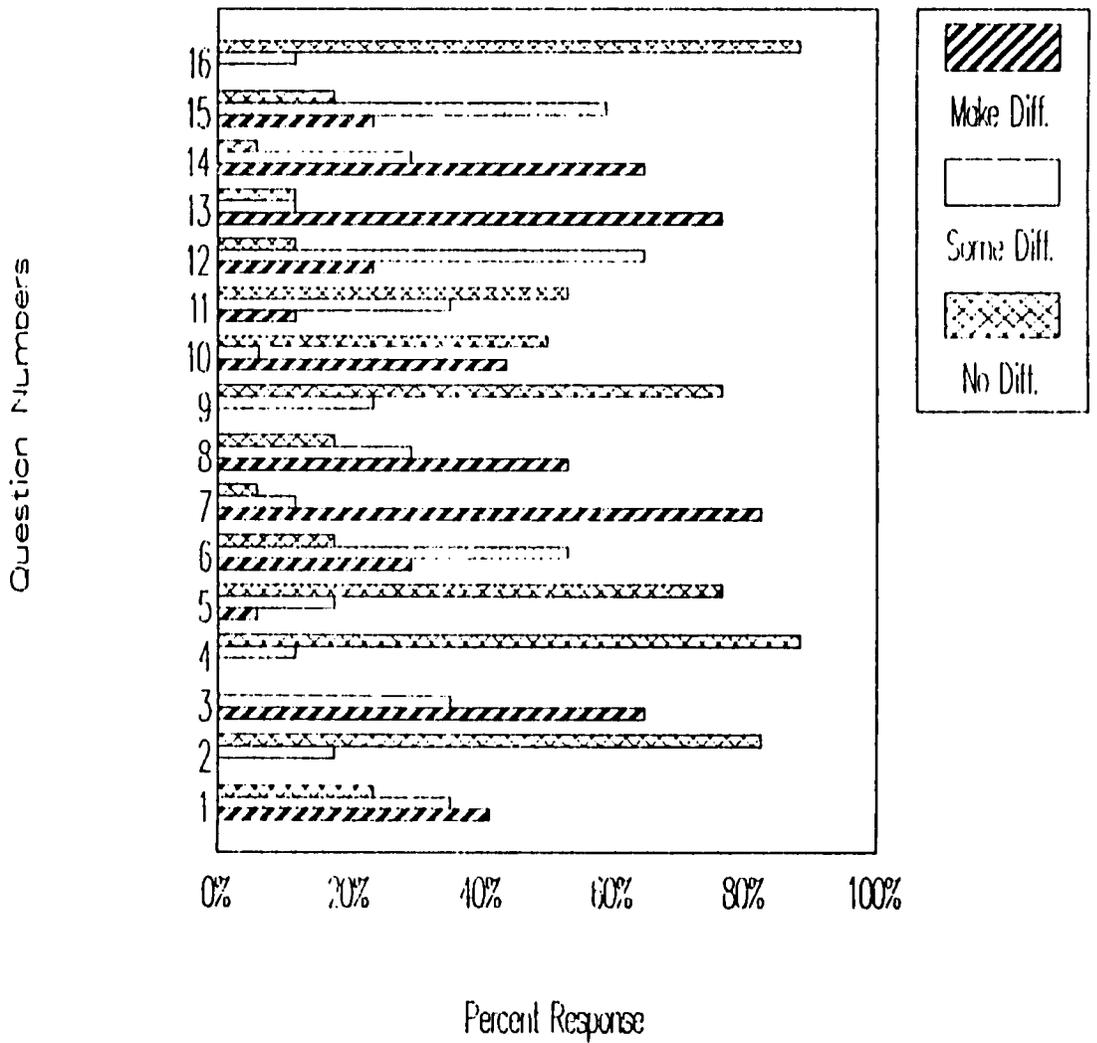
CONSTRAINT RECOGNITION

1-9 Yrs Service (N = 27)



CONSTRAINT RECOGNITION

10-20 Yrs Service (N = 17)



CONSTRAINT RECOGNITION

> 20 Yrs Service (N = 37)

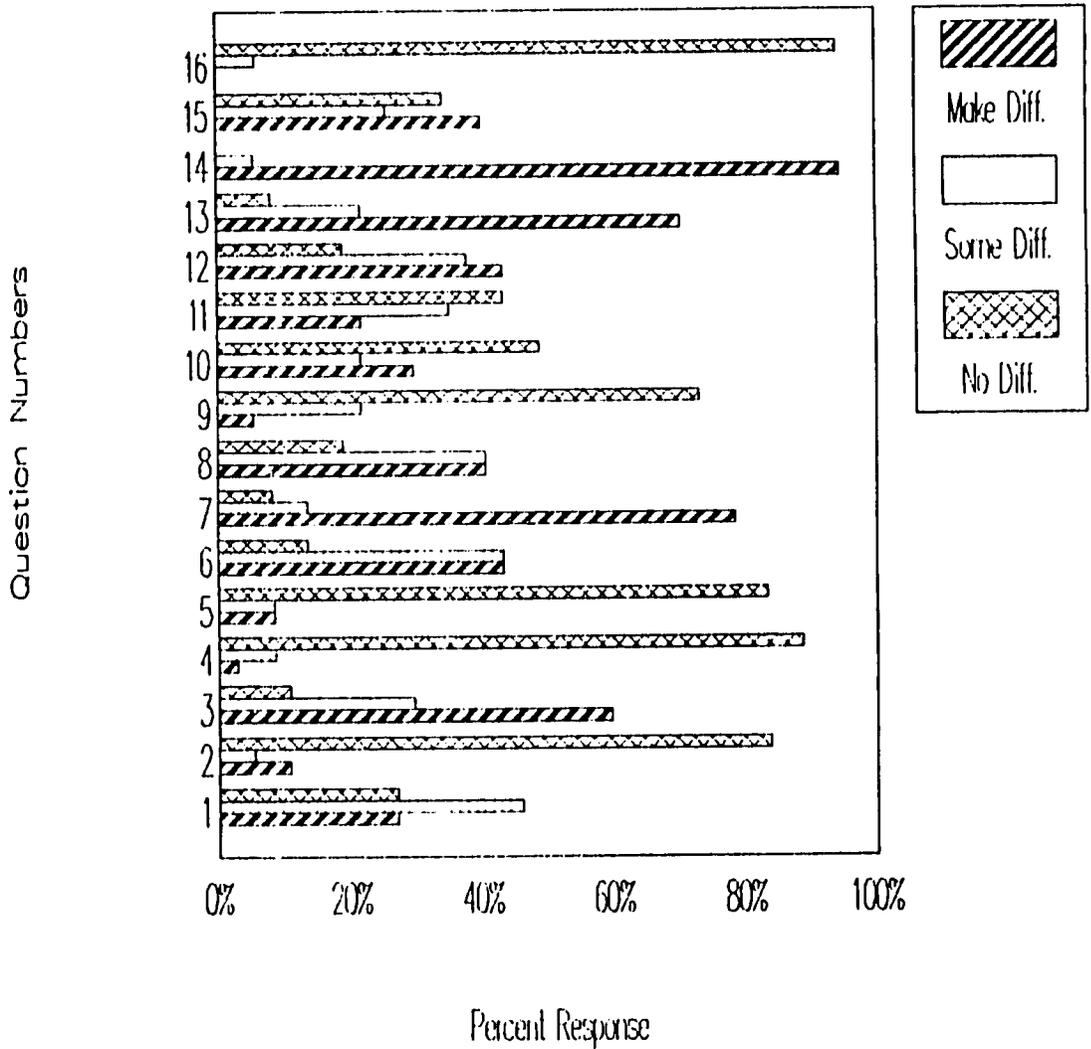


TABLE A-8

COMMUNICATION PATTERNS

EVALUATION OF OFFICIAL SOURCES OF AGRICULTURAL INFORMATION

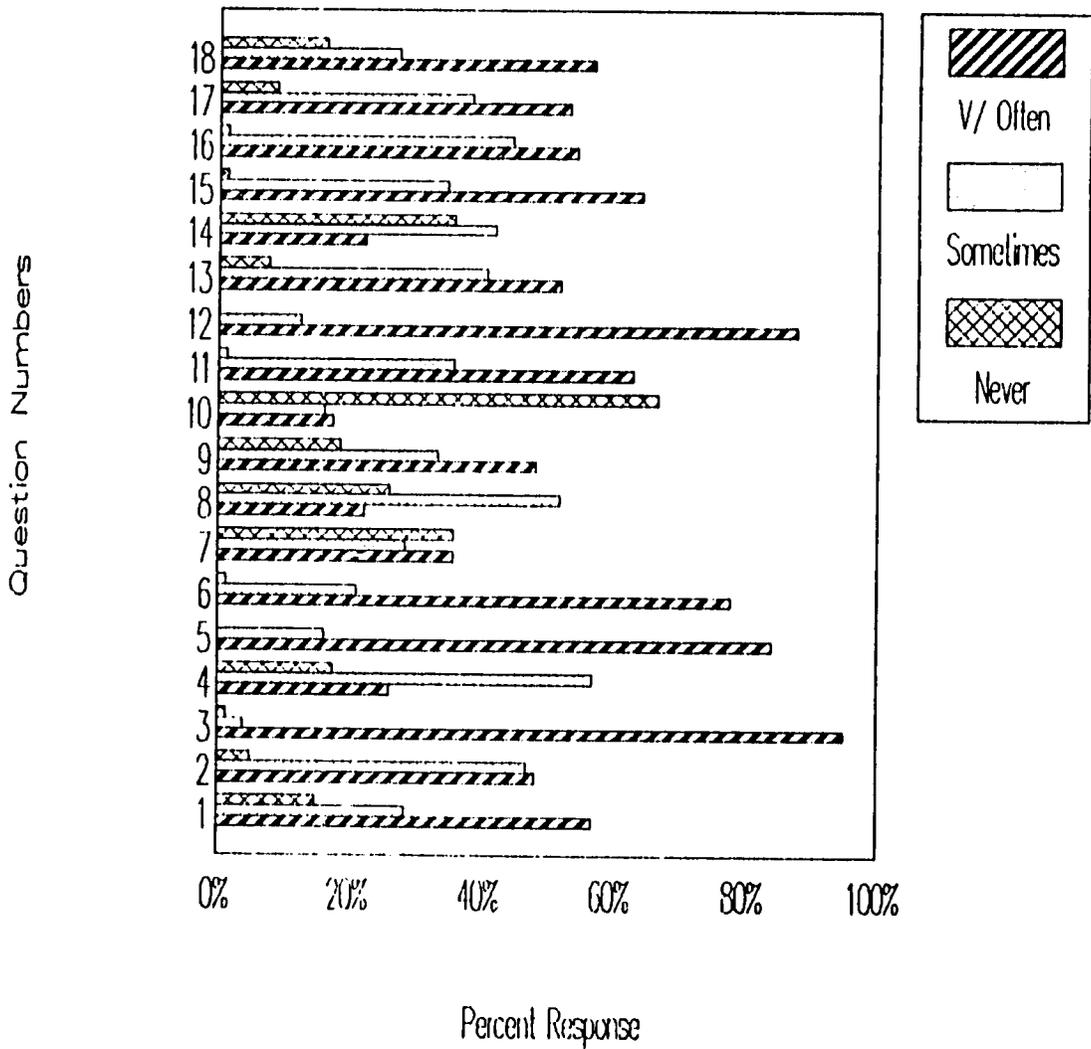
TABLE- A-8 ORGANIZATIONAL COMMUNICATION

S.No.	Description	General Mean (4 point value)
1.	Supervisors communicate to change the behavior of subordinates.....	2.34
2.	Supervisors communicate to establish an understanding with their subordinates.....	2.81
3.	Communication always flows (moves) from supervisors to subordinates (from higher ranks to lower ranks).....	1.55
4.	Communication moves both ways (From higher ranks to lower ranks and from lower ranks to higher ranks).....	2.90
5.	I feel satisfied communication with my supervisors about performance of my job...	1.87
6.	I can talk with my supervisors when things go wrong (tell them openly what went wrong).....	1.82
7.	I have a say (talk about it) in decisions that affect my job (influence my job some ways).....	2.93
8.	Department that I work for encourages differences of opinion (I can have different opinions on some departmental subjects and talk about them freely).....	2.98
9.	My supervisor encourages differences of opinion (He wants me to tell him if I agree or disagree with him on matters related to work).....	2.62
10.	I am consulted (informed) about policy changes that involve (affect) my job before they occur.....	3.48
11.	I receive enough information (circulars, bulletins, booklets and audio-visual material) from my department to do my job adequately (properly).....	2.22
12.	I send enough information (reports, memos, letters) to my supervisors to inform them adequately (properly) how my work is performed in the field.....	1.62
13.	When I give negative feedback to my supervisors on matters related to my work in the field they take action to find out why and try to make it right.....	2.40
14.	When I give negative feedback to my supervisors on matters related to my work in the field they ignore it.....	3.08
15.	I receive most instructions about my work in writing.....	2.19
16.	I receive most instructions about my work orally (by word of mouth).....	2.28
17.	My supervisor tells me what he thinks about my work (feedback).....	2.37
18.	In my department supervisors and subordinates talk to each other in a congenial and informal manner.....	2.39

1= Very Often, 2= Quite Often, 3= Sometimes, 4= Never

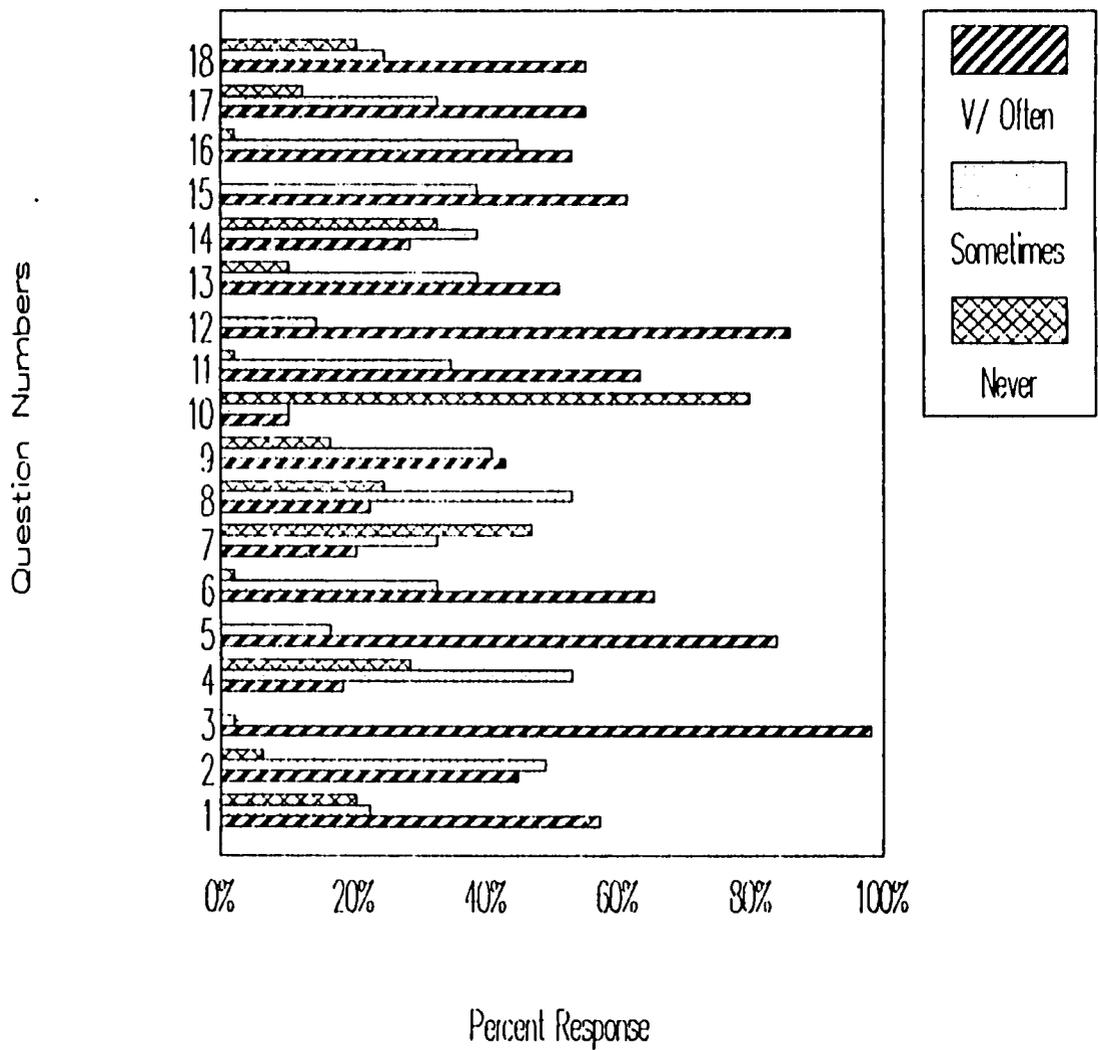
ORGANIZATIONAL COMMUNICATION

Overall (N = 81)



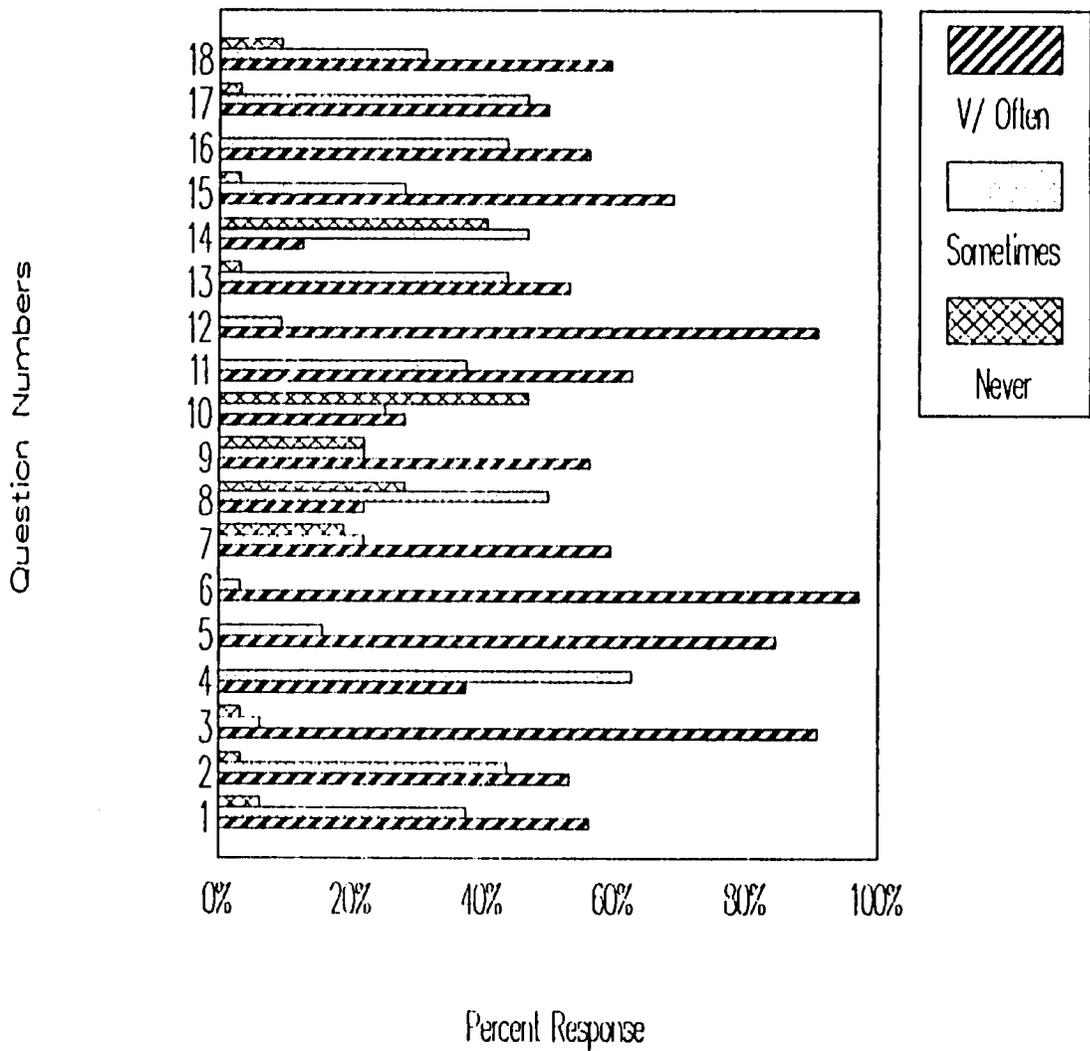
ORGANIZATIONAL COMMUNICATION

Field Staff (N = 49)



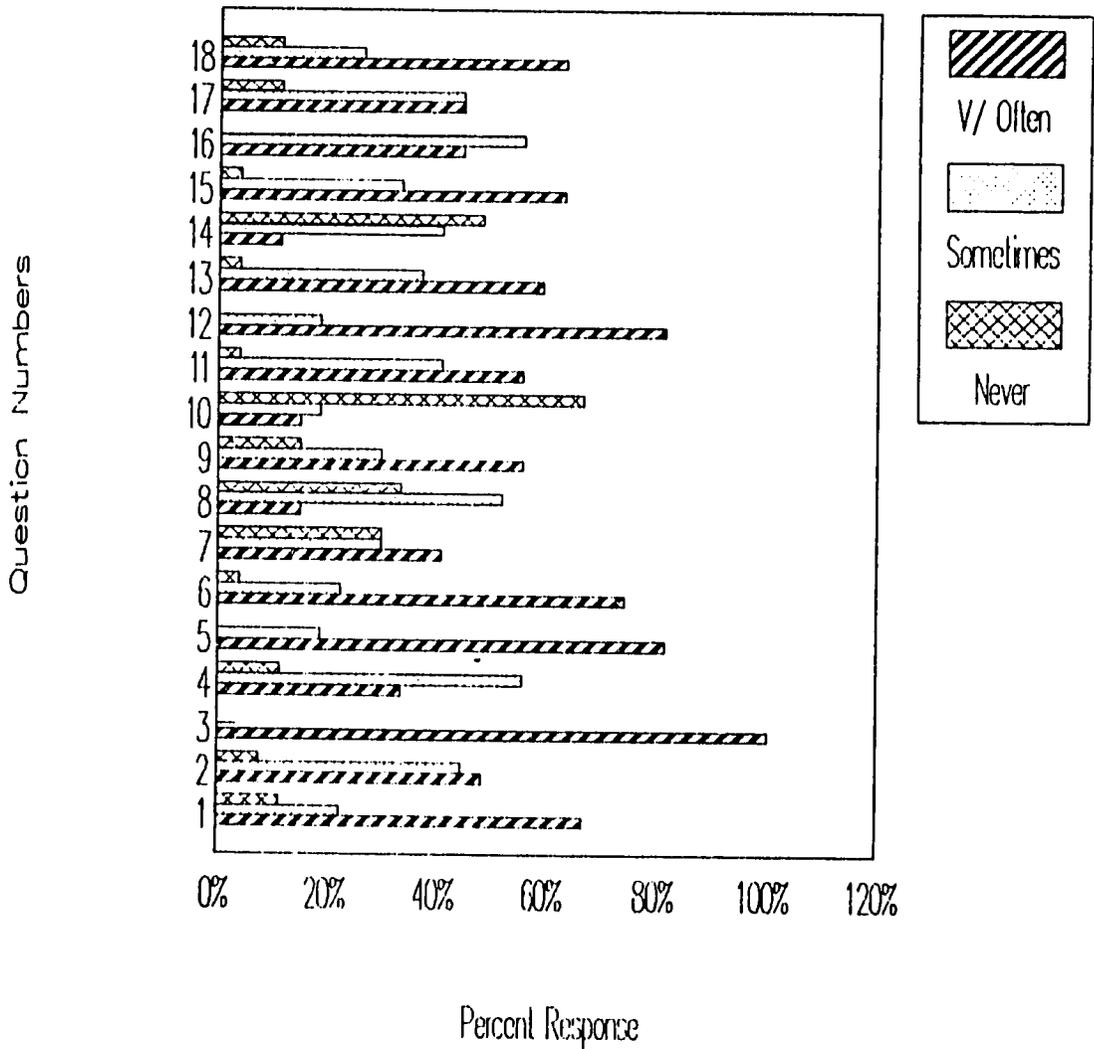
ORGANIZATIONAL COMMUNICATION

Office Staff (N = 32)



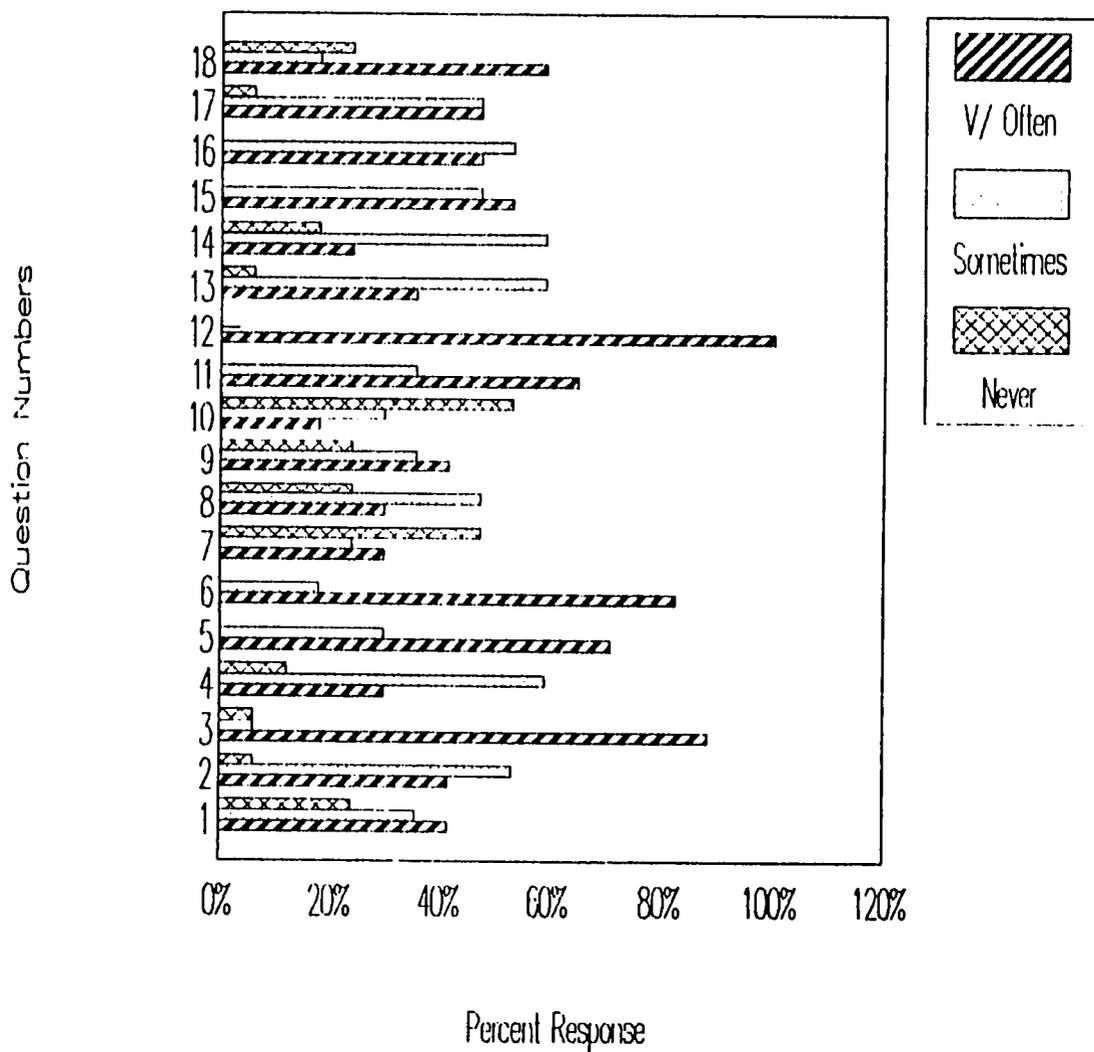
ORGANIZATIONAL COMMUNICATION

1-9 Yrs Service (N = 27)



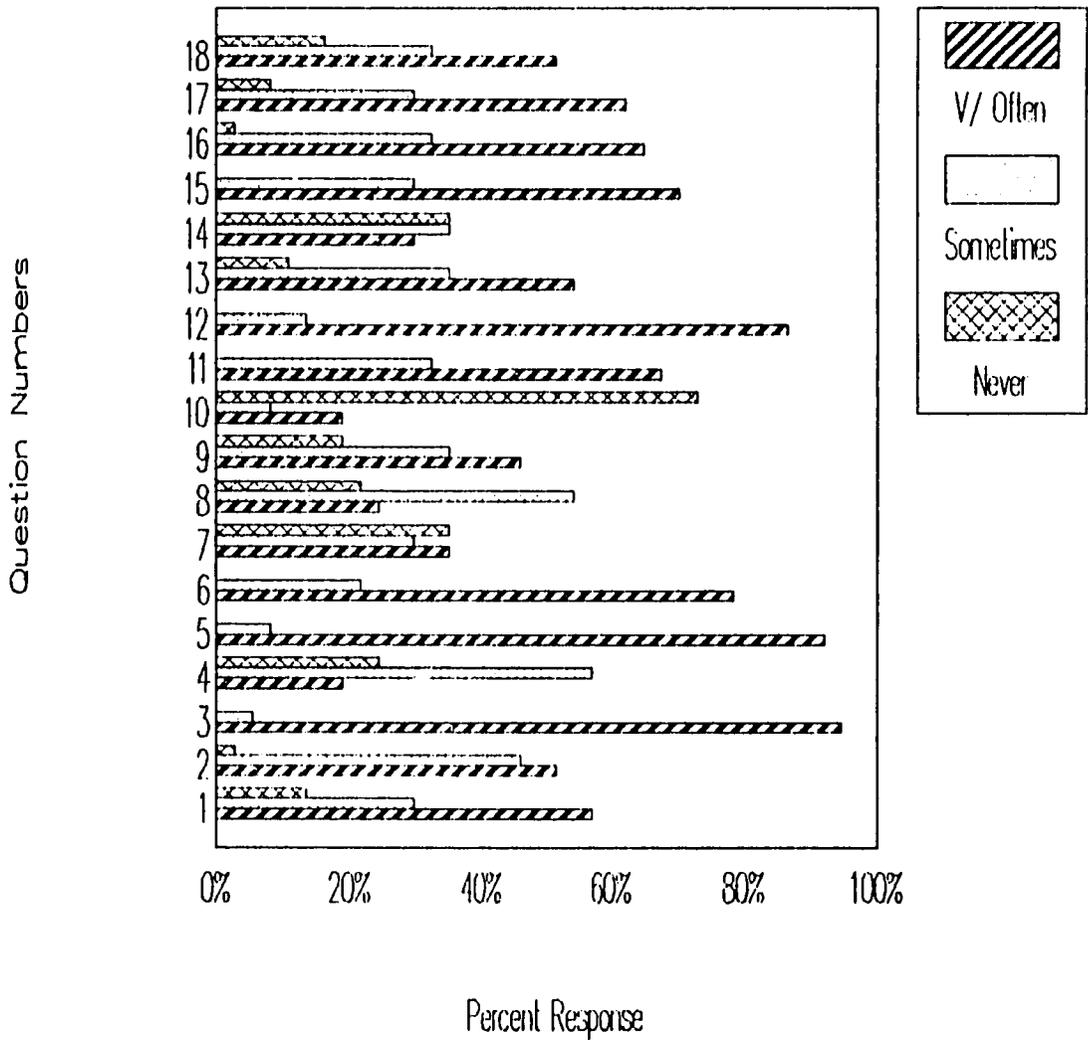
ORGANIZATIONAL COMMUNICATION

10-20 Yrs Service (N = 17)



ORGANIZATIONAL COMMUNICATION

> 20 Yrs Service (N = 37)



APPENDIX B
GRAPHS REPRESENTING
DATA IN
CHAPTER VII

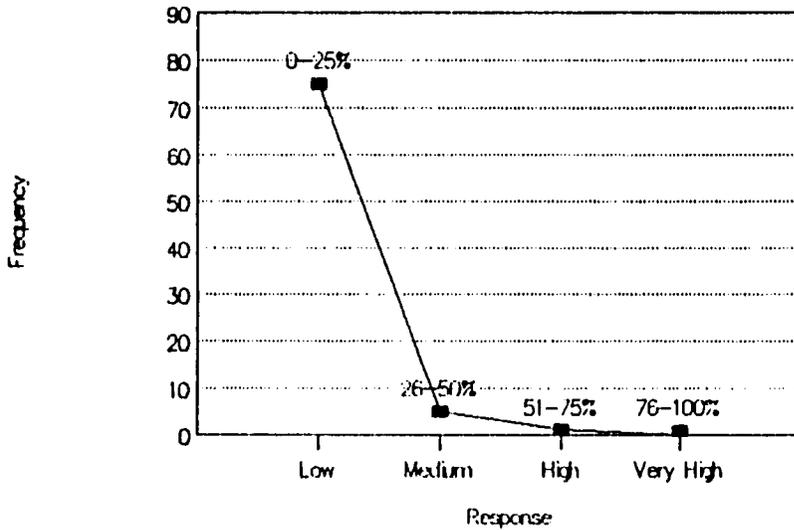
COORIENTATION MEASURES

TABLE B-1

S.No.	Description	Mean	Median	Mode	Range	S.D.
FARMERS.....						
1.	Use rotavator for land preparation	7.36	4.5	1	0-60	10.92
2.	Apply 40 Kg. seed per acre	83.63	90	100	40-100	15.82
3.	Use corporation treated seed	14.46	10	0	0-70	16.03
4.	Apply first irrigation after 12-18 days of sowing	51.51	60	70/80	0-100	29.68
5.	Time their most important irrigation at grain formation	74.81	80	80	20-100	19.09
6.	Apply last irrigation at the end of March	55.90	52.5	70	5-100	24.78
7.	Apply 'heavy' irrigation at second and third irrigations	38.09	30	0	0-90	31.69
8.	Do weeding after first irrigation using bar harrow	32.94	30	40	0-90	24.07

Use of Rotavator

Frequency Graph (N = 81)



[Q. a]

Use Rotavator for Land Preparation

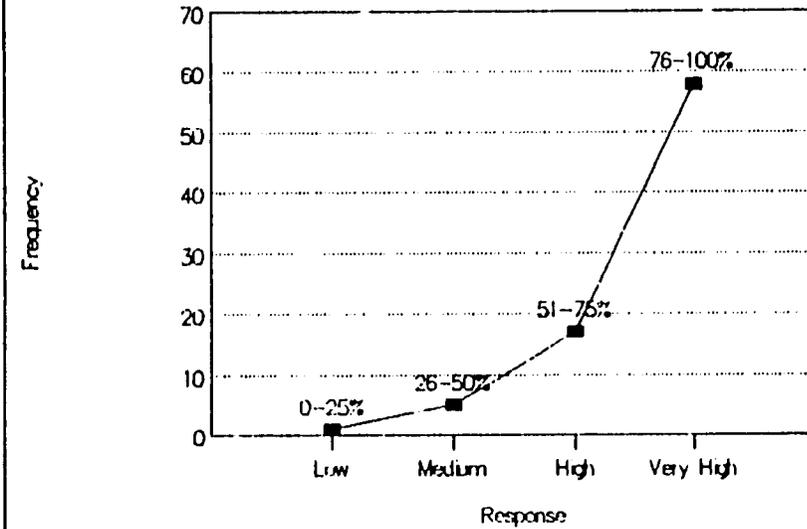
N	Mean	Median	Mode	Range	S.D.
81	7.36%	5%	1%	0 - 60	10.92

95% Confidence Interval Of The Mean = 2.38

99% Confidence Interval Of The Mean = 3.13

Apply 40Kg. Seed

Frequency Graph (N = 81)



[Q. b]

Apply 40Kg. Seed per acre

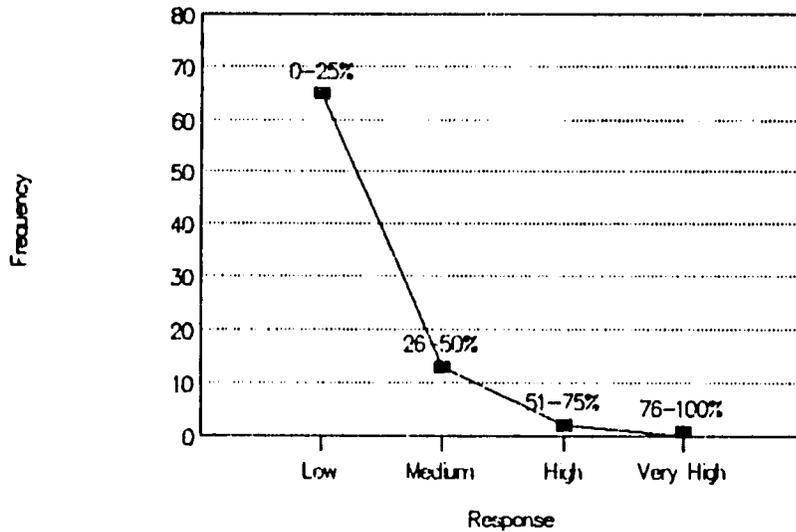
<u>N</u>	<u>Mean</u>	<u>Median</u>	<u>Mode</u>	<u>Range</u>	<u>S.D.</u>
81	83.63%	90%	100%	40 -100	15.82

95% Confidence Interval Of The Mean = 3.45

99% Confidence Interval Of The Mean = 4.54

Use Treated Seed

Frequency Graph (N = 80)



[Q. c]

Use Corporation Treated Seed

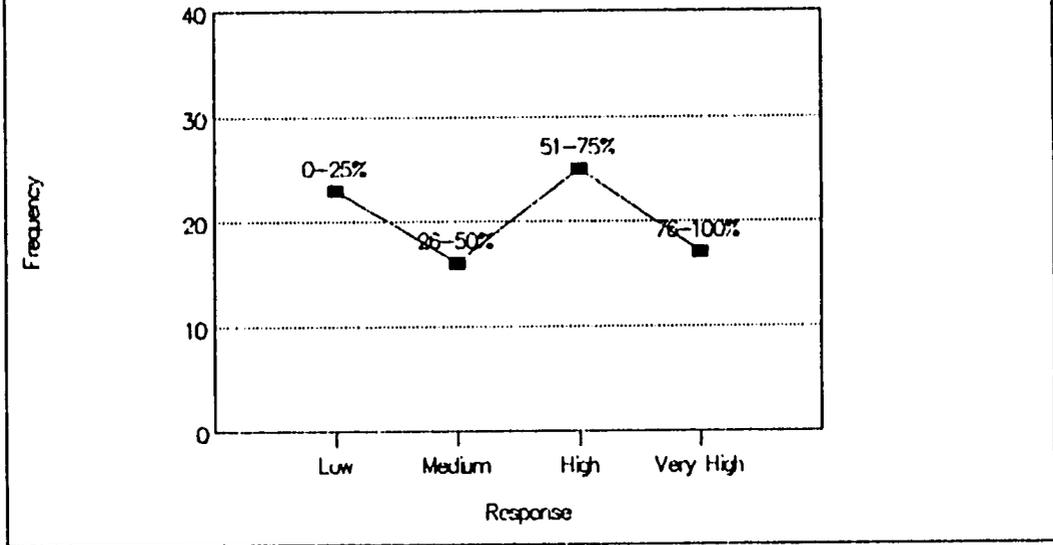
N	Mean	Median	Mode	Range	S.D.
81	14.46%	10%	0%	0 - 70	16.03

95% Confidence Interval Of The Mean = 3.49

99% Confidence Interval Of The Mean = 4.60

Irrigate 12-18 days of sowing

Frequency Graph (N = 81)



[Q. d]

Apply First Irrigation After 12-18 days of Sowing

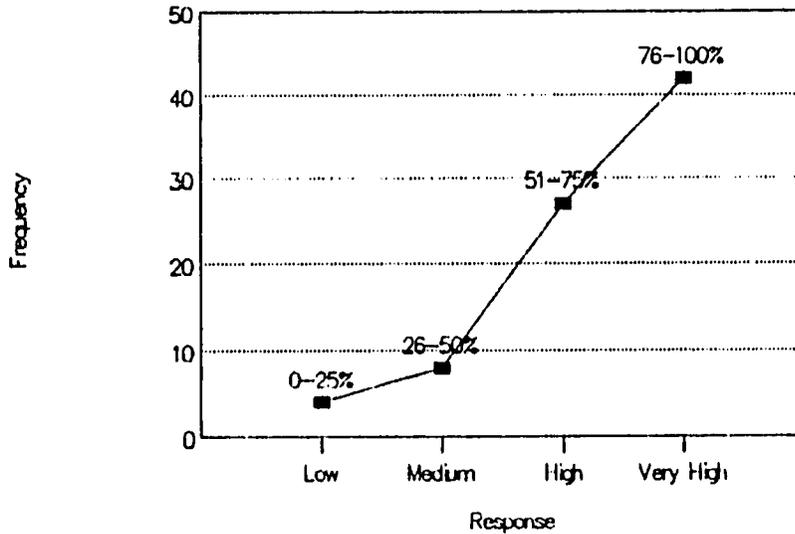
N	Mean	Median	Mode	Range	S.D.
81	51.51%	60%	70-80%	0 -100	29.68

95% Confidence Interval Of The Mean = 6.46

99% Confidence Interval Of The Mean = 8.51

Irrigate at Grain Formation

Frequency Graph (N = 81)



[Q. e]

Time Important Irrigation at Grain Formation

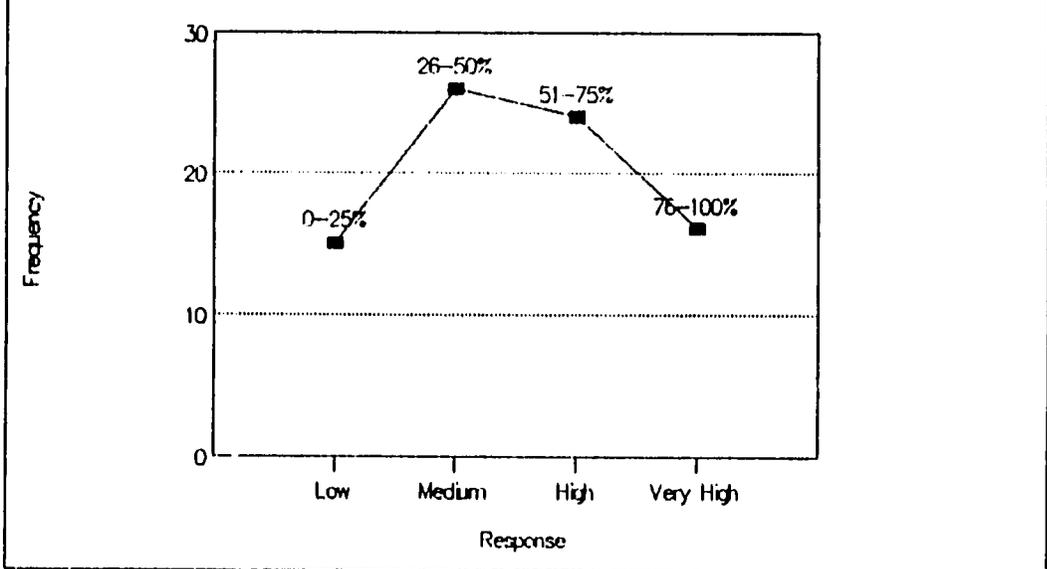
N	Mean	Median	Mode	Range	S.D.
81	74.81%	80%	80%	10 - 100	19.09

95% Confidence Interval Of The Mean = 4.16

99% Confidence Interval Of The Mean = 5.47

Last Irrigation in March

Frequency Graph (N = 81)



[Q. f]

Apply Last Irrigation at End of March

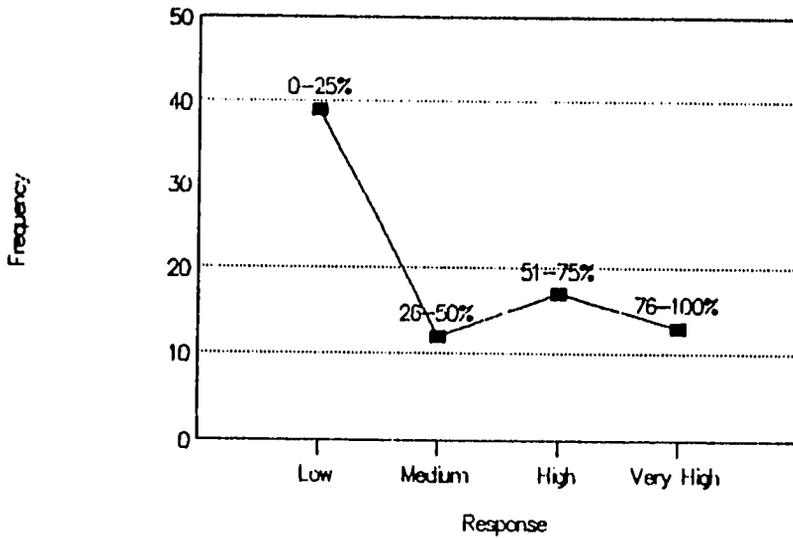
N	Mean	Median	Mode	Range	S.D.
81	55.90%	53%	70%	5 - 100	24.78

95% Confidence Interval Of The Mean = 5.40

99% Confidence Interval Of The Mean = 7.10

Heavy 2nd & 3rd Irrigation

Frequency Graph (N = 81)



[Q. g]

Apply 'Heavy' Irrigation at 2nd & 3rd Irrigation

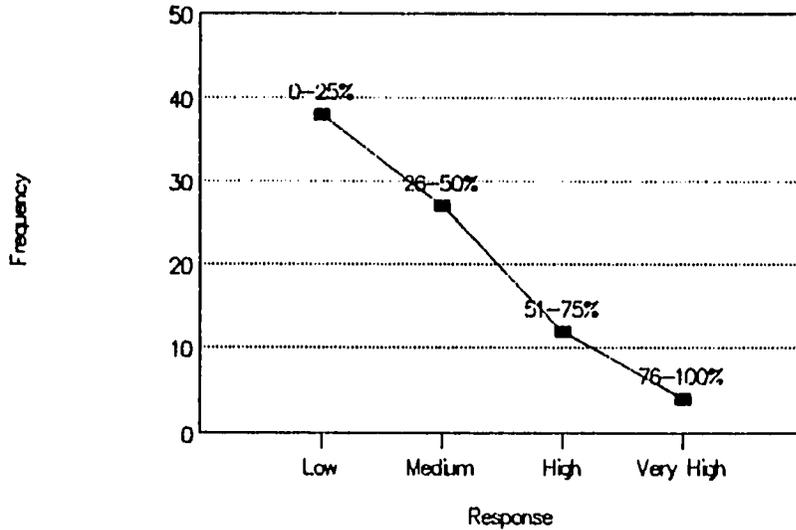
N	Mean	Median	Mode	Range	S.D.
81	38.09%	30%	0%	0 - 90	31.69

95% Confidence Interval Of The Mean = 6.90

99% Confidence Interval Of The Mean = 9.08

Weeding Using Bar Harrow

Frequency Graph (N = 81)



[Q. h]

Do Weeding After 1st Irrigation Using Bar Harrow

N	Mean	Median	Mode	Range	S.D.
81	32.94%	30%	40%	0 - 90	24.07

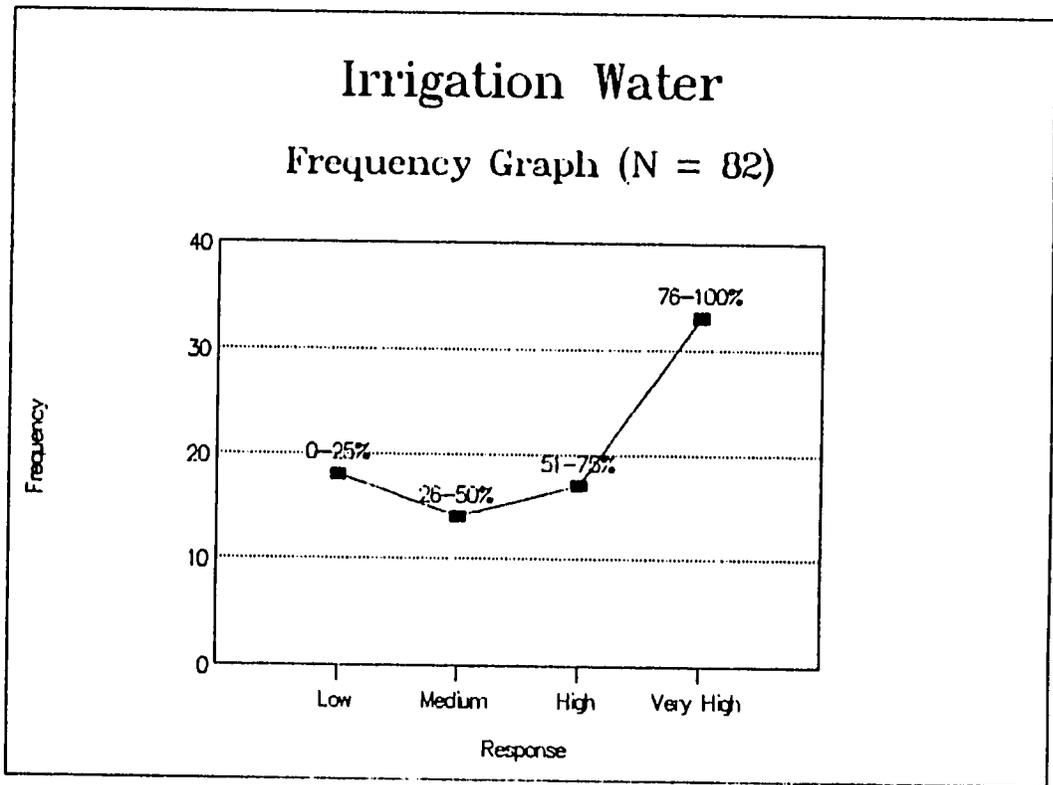
95% Confidence Interval Of The Mean = 5.24

99% Confidence Interval Of The Mean = 6.90

COORIENTATION MEASURES

TABLE B-2

S.No.	Description	Mean	Median	Mode	Range	S.D.
	I think in this subject area farmers information seeking would be :-					
a.	Irrigation Water	62.55	70	100	0-100	30.08
b.	Irrigation Practices	38.75	40	50	0-95	24.08
c.	Land Levelling	28.81	25	20	0-100	21.61
d.	Seeds	71.61	75	80	10-100	21.13
e.	Fertilizer	72.79	80	80	10-100	21.16
f.	Sprays	65.14	70	40-50-7 95-100	1-100	26.21
g.	Farm Loans	25.75	20	5	0-85	21.00
h.	Marketing	29.79	20	0	0-100	30.02



[Q. a]

Information Seeking for Irrigation Water

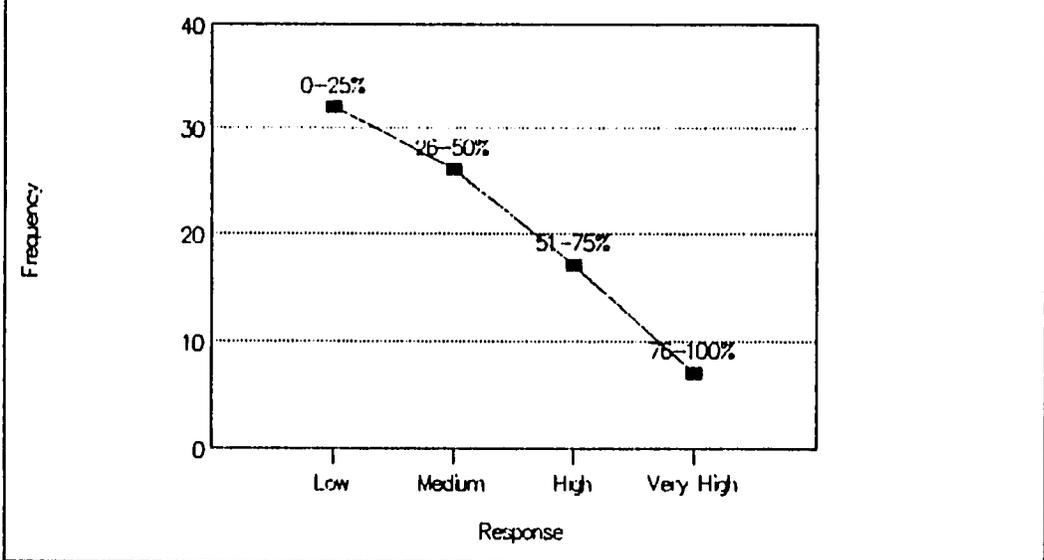
<u>N</u>	<u>Mean</u>	<u>Median</u>	<u>Mode</u>	<u>Range</u>	<u>S.D.</u>
82	62.55%	70%	100%	0 -100	30.08

95% Confidence Interval Of The Mean = 6.51

99% Confidence Interval Of The Mean = 8.57

Irrigation Practices

Frequency Graph (N = 82)



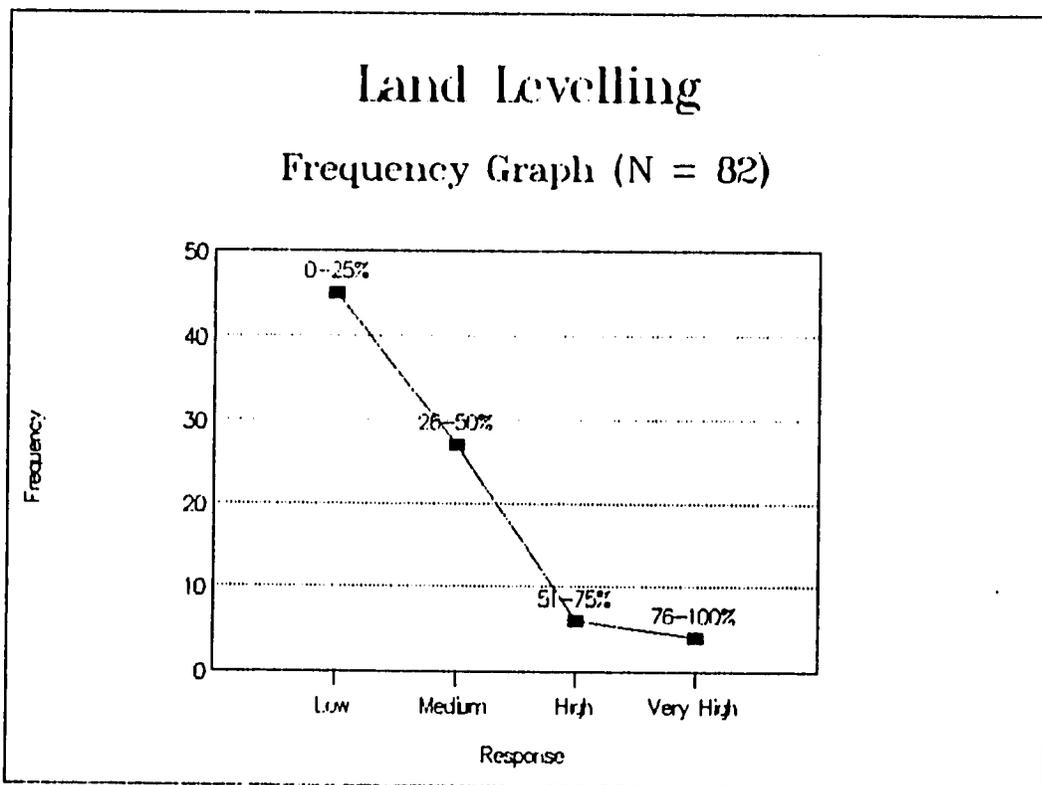
[Q. b]

Information Seeking for Irrigation Practices

N	Mean	Median	Mode	Range	S.D.
82	38.75%	40%	50%	0 - 95	24.08

95% Confidence Interval Of The Mean = 5.21

99% Confidence Interval Of The Mean = 6.86



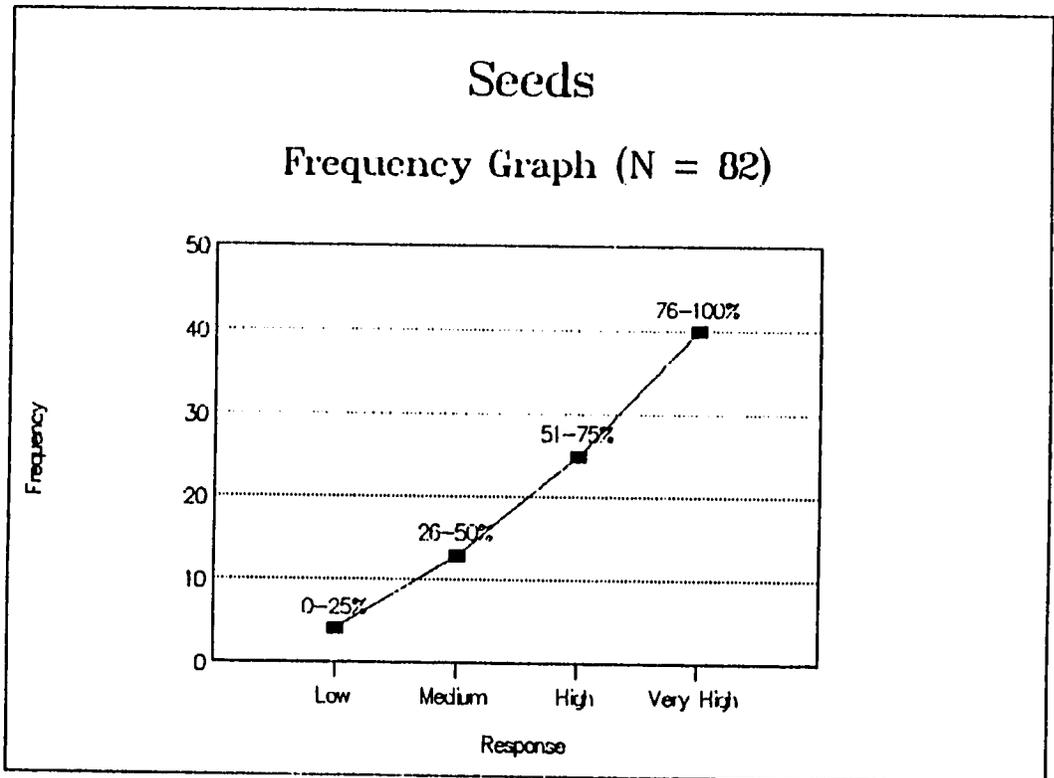
[Q. c]

Information Seeking for Land Levelling

N	Mean	Median	Mode	Range	S.D.
82	28.81%	25%	20%	0 - 100	21.61

95% Confidence Interval Of The Mean = 4.68

99% Confidence Interval Of The Mean = 6.16



[Q. d]

Information Seeking for Seeds

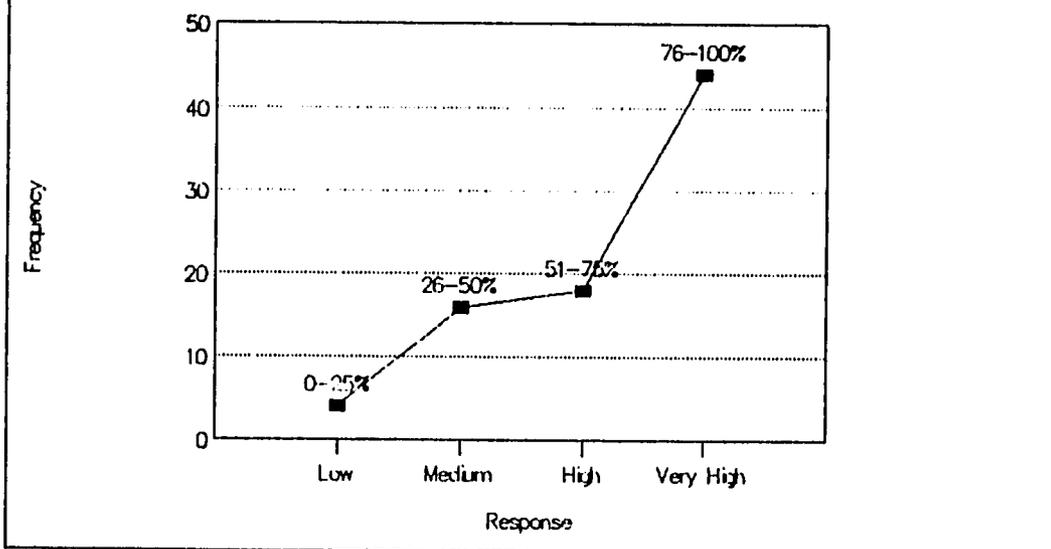
N	Mean	Median	Mode	Range	S.D.
82	71.61%	75%	80%	10 - 100	21.13

95% Confidence Interval Of The Mean = 4.57

99% Confidence Interval Of The Mean = 6.02

Fertilizer

Frequency Graph (N = 82)



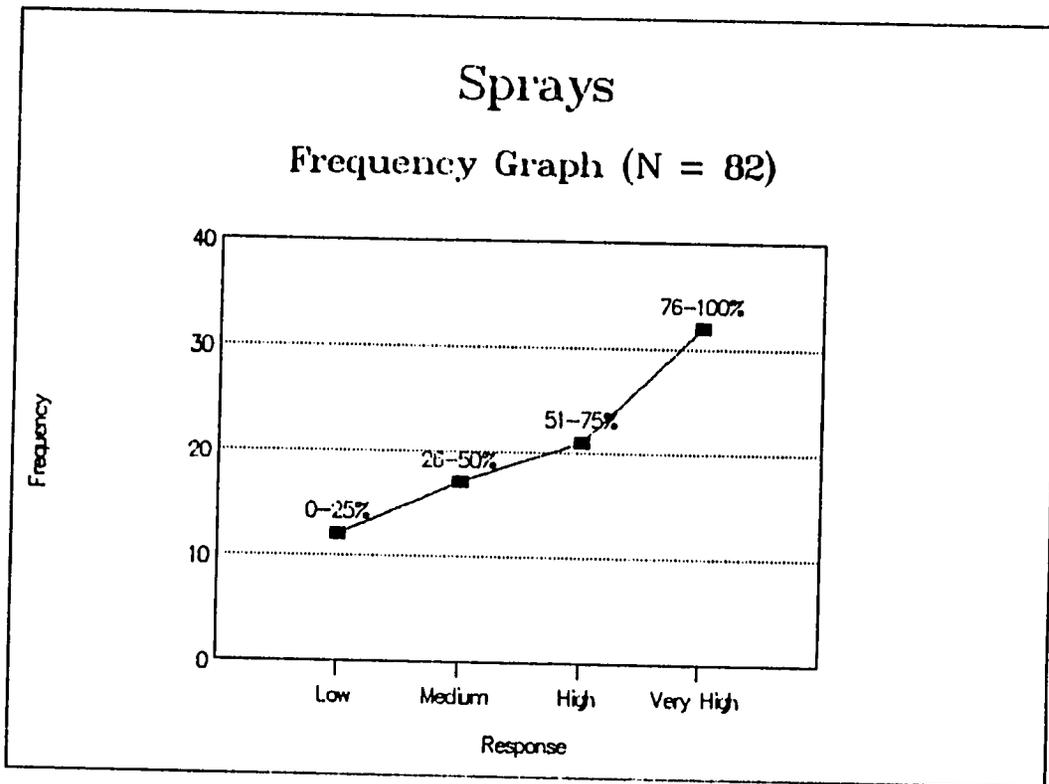
[Q. e]

Information Seeking for Fertilizer

N	Mean	Median	Mode	Range	S.D.
82	72.79%	80%	80%	10 - 100	21.16

95% Confidence Interval Of The Mean = 4.58

99% Confidence Interval Of The Mean = 6.03



[Q. f]

Information Seeking for Sprays

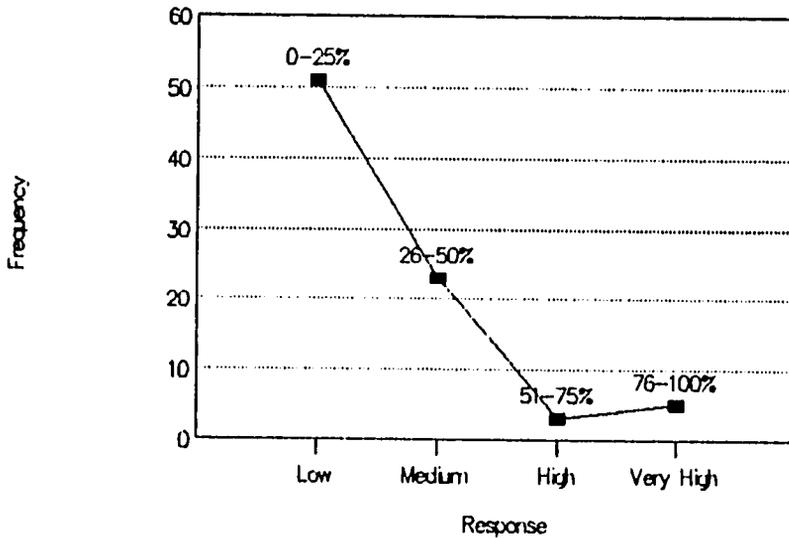
N	Mean	Median	Mode	Range	S.D.
82	65.14%	70%	40-50-75% 95-100%	1 -100	26.21

95% Confidence Interval Of The Mean = 5.67

99% Confidence Interval Of The Mean = 7.47

Farm Loans

Frequency Graph (N = 82)



[Q. g]

Information Seeking for Farm Loans

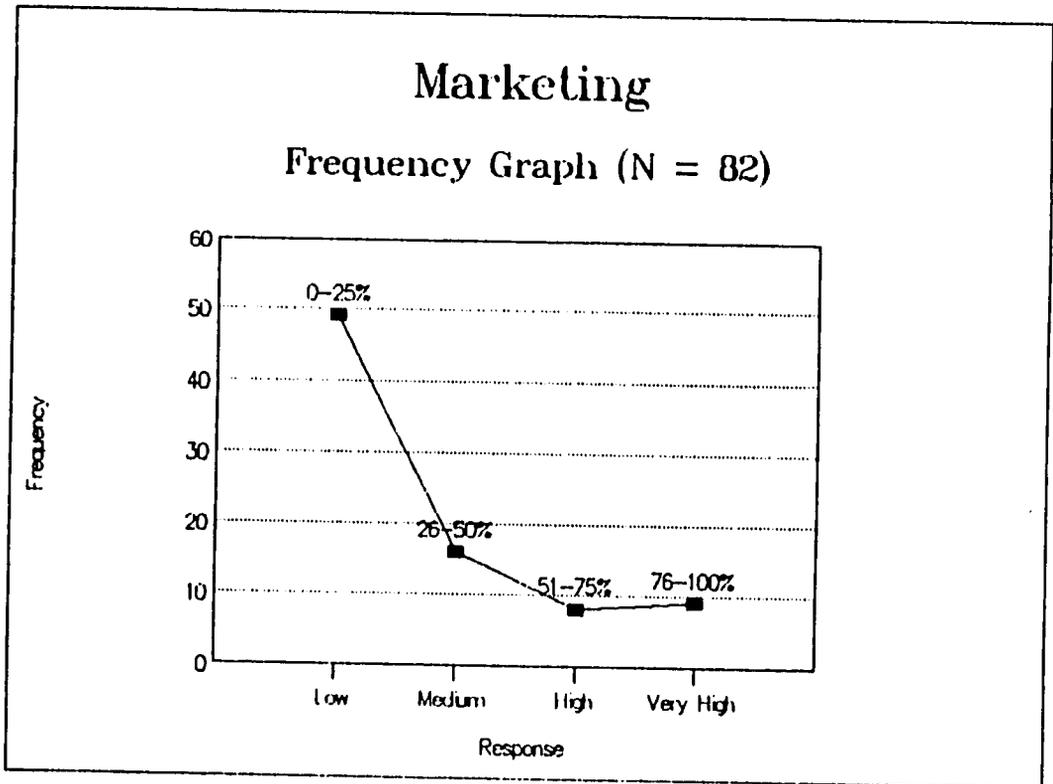
N	Mean	Median	Mode	Range	S.D.
82	25.75%	20%	5%	0 - 85	21

95% Confidence Interval Of The Mean = 4.55

99% Confidence Interval Of The Mean = 5.98

Marketing

Frequency Graph (N = 82)



[Q. 1]

Information Seeking for Marketing

N	Mean	Median	Mode	Range	S.D.
82	29.79%	20%	0%	0 - 100	30.02

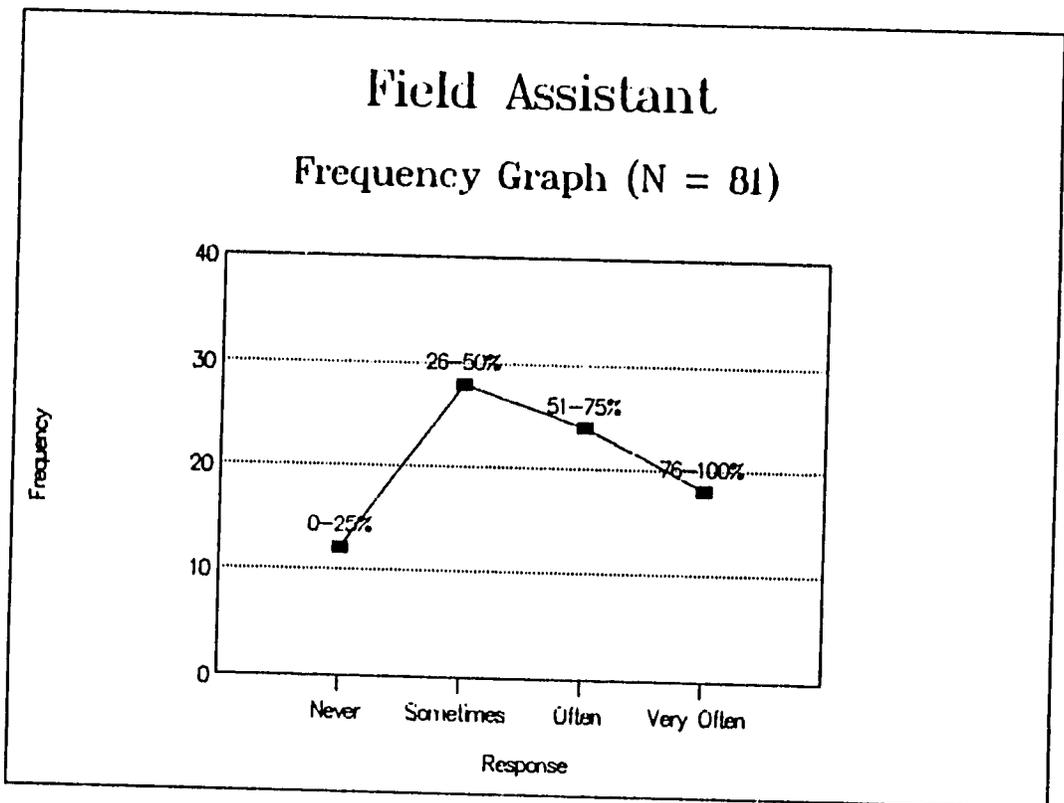
95% Confidence Interval Of The Mean = 6.50

99% Confidence Interval Of The Mean = 8.55

COORIENTATION MEASURES

TABLE B-3

S.No.	Description	Mean	Median	Mode	Range	S.D.
	Sources for information Gathering					
1.	Field Assistant	52.56	50	60	1-95	23.07
2.	Agricultural Officer	35.51	35	40	2-100	20.44
3.	Mobile Credit Officer	15.03	10	5	0-80	15.53
4.	OFWM Officer	32.29	25	10	1-85	24.27
5.	Zeladar	14.58	5	10	0-100	20.38
6.	Other Farmers	61.48	65	70	8-100	20.51
7.	Private Market Agents	24.41	20	20	2-75	18.47
8.	Market Store Owners	6.72	2	0	0-50	10.38



[Q. a]

Information Source (Field Assistants)

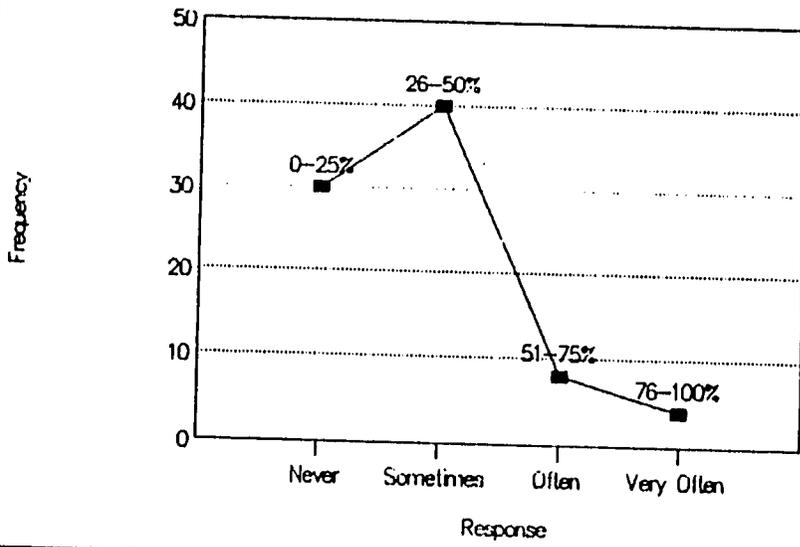
N	Mean	Median	Mode	Range	S.D.
81	52.56%	50%	60%	1 - 95	23.07

95% Confidence Interval Of The Mean = 5.02

99% Confidence Interval Of The Mean = 6.61

Agricultural Officer

Frequency Graph (N = 81)



[Q. b]

Information Source (Agricultural Officer)

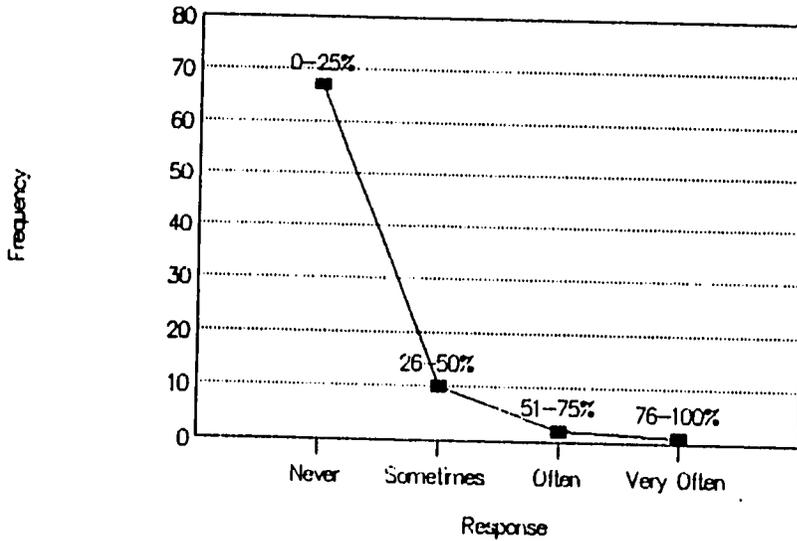
N	Mean	Median	Mode	Range	S.D.
81	35.51%	35%	40%	2 - 100	20.44

95% Confidence Interval Of The Mean = 4.45

99% Confidence Interval Of The Mean = 5.86

Mobile Credit Officer

Frequency Graph (N = 79)



[Q. c]

Information Source (Mobile Credit Officer)

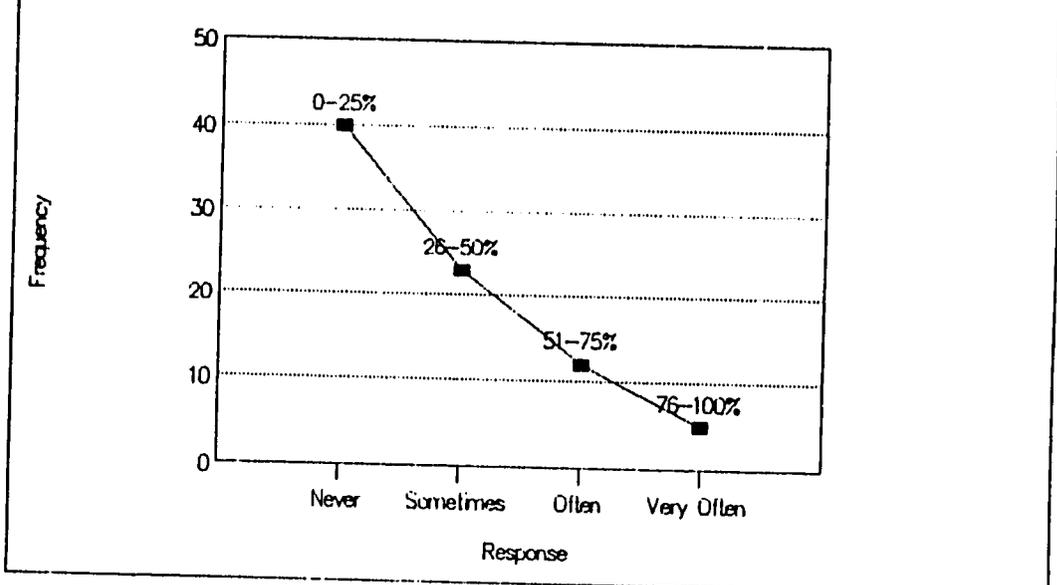
N	Mean	Median	Mode	Range	S.D.
79	15.03%	10%	5%	0 - 80	15.53

95% Confidence Interval Of The Mean = 3.42

99% Confidence Interval Of The Mean = 4.51

Water Management Officer

Frequency Graph (N = 79)



[Q. d]

Information Source (Water Management Officer)

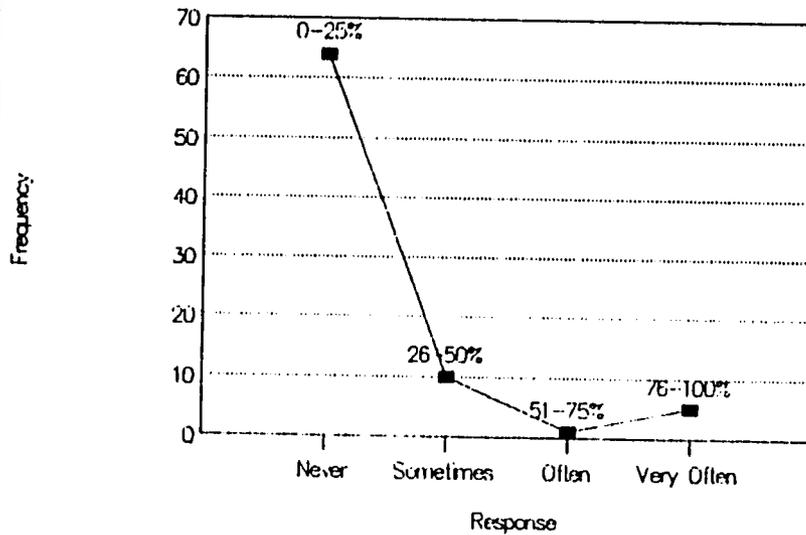
N	Mean	Median	Mode	Range	S.D.
79	32.29%	25%	10%	1 - 85	24.27

95% Confidence Interval Of The Mean = 5.35

99% Confidence Interval Of The Mean = 7.04

Zeladar

Frequency Graph (N = 79)



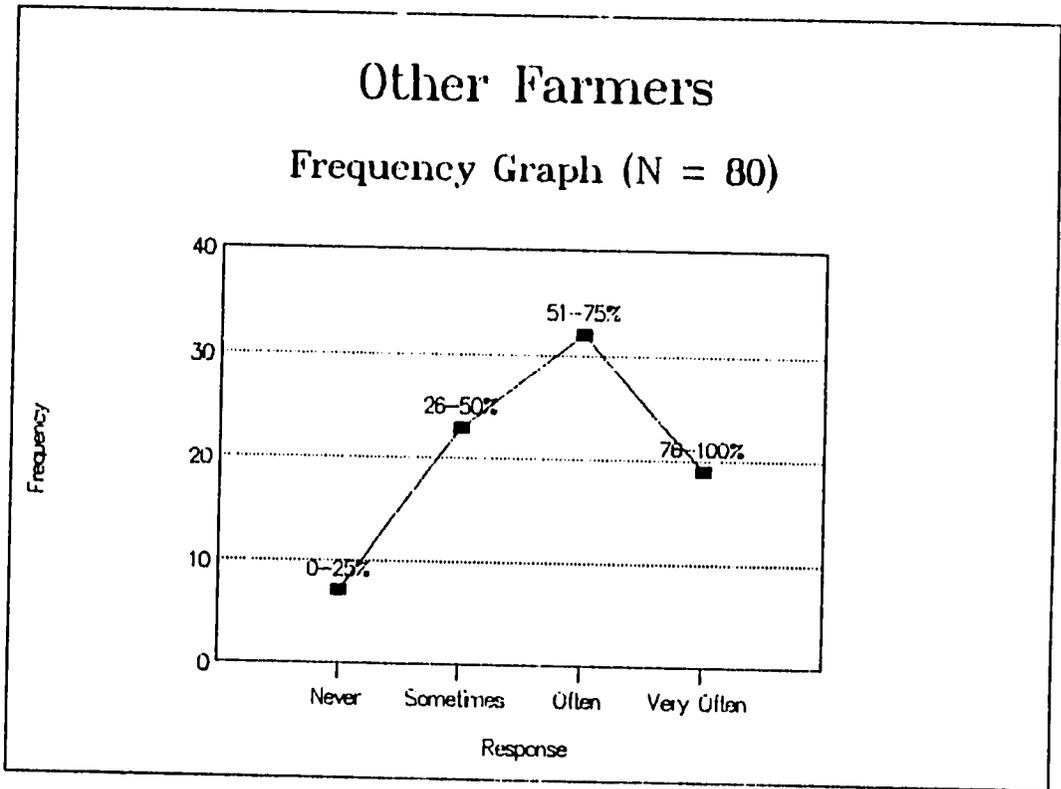
[Q. e]

Information Source (Zeladar)

N	Mean	Median	Mode	Range	S.D.
79	14.58%	5%	10%	0 -100	20.38

95% Confidence Interval Of The Mean = 4.49

99% Confidence Interval Of The Mean = 5.92



[Q. f]

Information Source (Other Farmers)

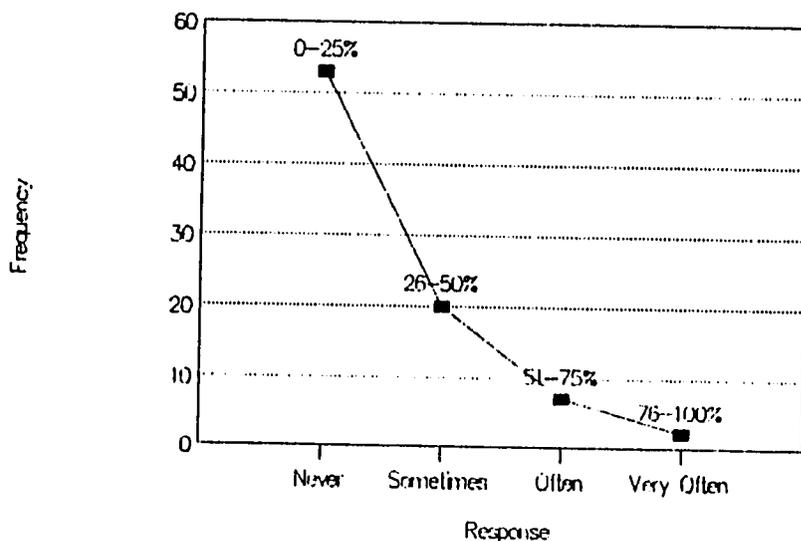
N	Mean	Median	Mode	Range	S.D.
80	61.48%	65%	70%	8 - 100	20.51

95% Confidence Interval Of The Mean = 4.49

99% Confidence Interval Of The Mean = 5.92

Private Market Agents

Frequency Graph (N = 81)



[Q. g]

Information Source (Private Market Agents)

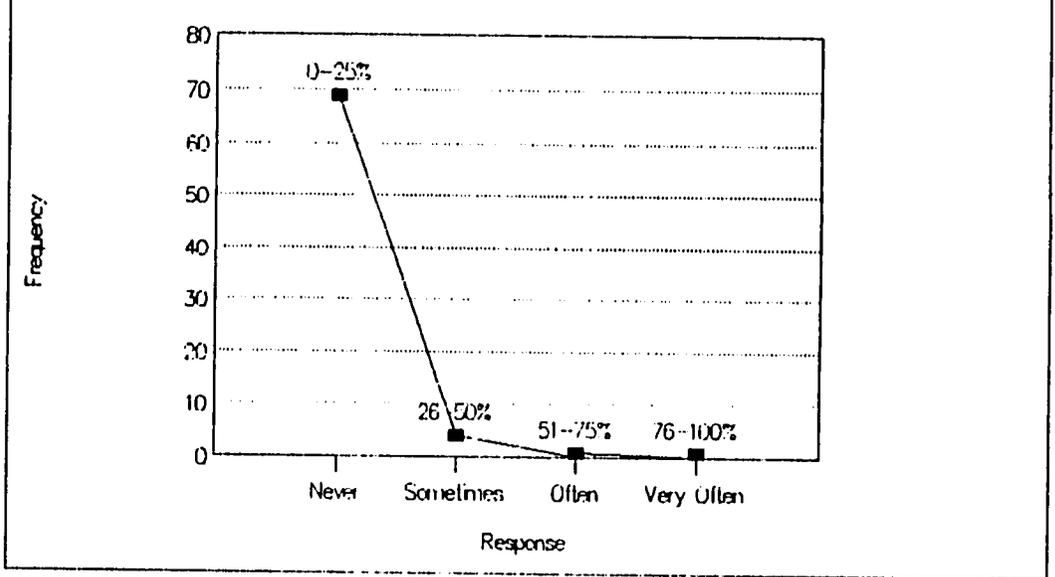
N	Mean	Median	Mode	Range	S.D.
81	24.41%	20%	20%	2 - 75	18.47

95% Confidence Interval Of The Mean = 4.02

99% Confidence Interval Of The Mean = 5.29

Market Store Owners

Frequency Graph (N = 73)



[Q. h]

Information Source (Market Store Owners)

N	Mean	Median	Mode	Range	S.D.
73	6.72%	2%	0%	0 - 50	10.38

95% Confidence Interval Of The Mean = 2.38

99% Confidence Interval Of The Mean = 3.13

