THE INFLUENCE OF GENDER RELATIONS ON EXTENSION DELIVERY IN DANGME WEST DISTRICT OF GHANA

by

EMILY REBECCA AKOTIA

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Department of Agricultural Extension
University of Ghana
Legon

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ABSTRACT

Extension delivery involves a relationship between an extension agent and a farmer who participates in extension activities. The general perception of the extension services in Ghana is that it is skewed positively towards men as against women farmers. This study was therefore directed towards looking at the nature of gender relations between extension agents and farmers to find out how it affects extension delivery.

The study was conceptualized with 'gender' as a social construct that defines the roles and responsibilities of men and women in society and 'extension delivery' as a social interaction between extension agents and farmers. The social interaction is characterised by interpersonal relationship, conceptualised as a system composed of internal and external. The internal components are characterized by interaction, sentiments and activities operating between the agent and farmer; (Homans, 1951). These are elaborated by the external components made up of the extension organisation, agents and the farmers social system. The elements of interaction measured in the study were acquaintance, frequency and duration of interaction. Sentiments in this study were measured by its intensity, that is, the feeling of liking, sentience, trust, reciprocation and group size. Activities were measured by involvement and relevance. Participation was conceptualised as taking part or Cupertino in extension activities.

The study was conducted in the Dangme West District, an agricultural District in the Greater Accra Region with a purposive sample of 62 men and 44 women from ten villages that had experienced the services of both male and female agents. All the extension agents in the district, 14 males and 3 females were administered with questionnaires, and the Deputy Director of the Department of Agricultural Extension Services was also interviewed.

The findings of the study confirmed that the relationship and participation in extension activities involving both male and female agents and farmers are skewed positively towards men as against women farmers. This skewed situation has come about as a result of the relatively lower status of women that makes men and not the women the recipients of agents visiting the household. This is compounded by constraints such as work overload and time that make it difficult for most women to avail themselves for extension activities. The agents lack of gender sensitivity and knowledge about gender and its effects on extension delivery captured by the fact that, the DAES has no strategies in place that is known to the agents by which they could reach women farmers, left the field staff operating as they wished. It was also found that farmers were indifferent to the gender of the agents, all they wanted was help from a government official. While both men and women farmers feel comfortable with female agents and vice versa, male agents felt more comfortable with men than women farmers. The main reason is the fear of suspicion of intimate relations between them by society. The male agent conducted more gender-neutral activities for both men

and women farmers, while the female agents conducted gender neutral and women biased activities with women farmers, which are relevant to them.

The study recommends that extension delivery to women farmers could be improved if the organisation translated its policy to reach women farmers into gender sensitive strategies. Also information for monitoring and evaluation of extension activities should be by segregated by gender. This would motivate front-line agents to make conscious efforts at reaching women farmers.

DECLARATION

I, Emily Rebecca Akotia do hereby declare that except for references to other peoples work, which has been duly cited, this work is the product of my own original research. I also solemnly declare that this thesis has neither in whole nor in part been presented for another degree elsewhere.

.....

(Emily Rebecca Akotia)

Student

.....

16/4/99

(Dr Felix Y. M. Fiadjoe)

Supervisor

DEDICATION

This Thesis is dedicated to my husband

Pino Akotia

who was very understanding

and supportive in its production.

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LIST OF ACRONYMS

CG	Contact group
DAEO	District Agricultural Extension Officer
DAES	Department of Agricultural Extension Service
DPCU	The District planning Coordinating Unit
ETP	Extension Test Plot
FAO	Food and Agriculture Organization
FDD	Farmers Day Durbar
FLS	Frontline Staff
FPP	Farmers Production Plot
GDP	Gross Domestic Product
GGDP	Ghana Grains Development Project
IFAD	International Fund for Agricultural Development
Inc	Incorporated
ISNAR	Systems. international Service for National Agricultural Research
JICA,	Japan International Cooperation Agency
m	Million
M	Men
MD	Mini Demonstration
MIDENO	Mission de Developpement de la Province du Nord-Ouest
MIS	Management Information System
MoA	Ministry of Agriculture
MoFA	Ministry of Food and Agriculture.
MT	Men Total
MTADP	Medium Term Agricultural Development Programme
MTDP	Medium Term Development Programme
NAEP	National Agricultural Extension Project
NGO	Non Governmental Organizations
NRI	Natural Resources Institute
ODA	Overseas Development Agency
SMS	Subject Matter Specialists
T&V	Training and Visit System.
WIA	Women in Agriculture
UAESG	Unified Agricultural Extension System of Ghana
USAID	United States Agency for International Development
VDP	Verification Demonstration Plot
VEM	Village Extension Motivator
W	Women
WAIHFS	Women, Agricultural Intensification and Household Food Security
WFEU,	Women Farmers Extension Unit
WIAD	Women in Agricultural Development
WT	Women Total

CHAPTER 1

INTRODUCTION

1.0 Introduction

This chapter constitutes the background of the study. It reflects on the state of Ghanaian women's farmers and purpose of the study. Also discussed are the attempts at the development and practice of the extension service with particular attention on the issue of gender. The chapter is concluded with the statement of the research problem, research question and objectives for the study.

1.1 The Status of Women Farmers in Agriculture in Ghana

Ghana is an agricultural country, with over 70% of the population living in the rural area. Farming, their main occupation provides food, jobs, raw materials for industries and commodities for export. Agriculture accounts for over half of the Gross Domestic Product (GDP) and about three-quarters of export earnings (NAEP, 1992). The economy of Ghana is agriculture based therefore, any factor that adversely affects agricultural productivity, affect the macro economy in particular, and the social system in general.

Farming is done by men and women. Both of who require improved technology for efficient production. According to the Staff Appraisal Report of the National Agricultural Extension Project, (NAEP) in 1992:

> Women (in Ghana) constitute half of the total population and 47% of the labour force; they account for about 70% of the total food crop production; they process and market nearly all the grains and about 30% are heads of households (NAEP, 1992:15).

The 1970 and 1984 Agricultural Census revealed a consistent pattern of increase in women going into farming. Between 1970 and 1984, the number of women farmers increased by 102% (from 0.78m to 1.6m) compared to men, 72% (from 1.0m-1.6m). By 1984, women farmers outnumbered men in Ashanti, Central, Eastern, Western and Volta Regions.

A study on women in mixed crop farming, at Nkawie Toase in the Ashanti Region of Ghana by Tamakloe (1978) revealed that although women took part in all farming activities and the income accruing to them was low, most of them were satisfied with the status quo. The contradiction was attributed to the fact that the women knew no other scenario and so felt satisfied with what they got as a result of the low productivity of their enterprise.

Among the causes of the low productivity in the activity of women farmers, according to Andah (1978) and Tamakloe (1978) were limited knowledge and access to production inputs. Additionally, Andah (1978) observed that the attitude of extension agents, who direct their attention to men mostly, deprive women of technical knowledge for production, information and assistance to credit, as a cause of low productivity of women farmers. Many researchers and policy makers share the observation that extension does not reach women farmers (Saito and Weideman, 1990 and Mensah, 1997).

In an era of rapid technological development, aimed at improving productivity in all activities including farming, information on technology must reach users with minimum delay. The main organisation responsible for disseminating such information and associated skills to farmers in Ghana, is the Department of Agricultural Extension Service (DAES) of the Ministry of Food and Agriculture (MoFA). In the discharge of this service, extension agents had tended to contact men more than women farmers. In the estimation of the Deputy Director of Extension Services only about 20-30% of farmers extension contact are women (Keller 1985; JICA, 1993; World Bank, 1991 and Donkoh, 1996).

In 1993, a workshop was organised by the World Bank for senior officials of the extension and research systems of Anglophone Sub-Saharan Africa in Accra. The consensus reached at that workshop was that, special diagnostic analysis and innovative methodologies needed to be devised in order to service the special category of farmers who are not adequately reached. This special category of farmers includes women. Also among the recommendations made was the need to improve extension services to women farmers by Bagchee (1993).

Inspite of these recommendations in 1993, at another workshop organised by Sasakawa Global 2000 on "Women, Agricultural Intensification and Household Food Security" (WAIHFS), in 1996, Korang Amoako, the Director of DAES and Tetebo, the Director of the Department of Women in Agricultural Development (WIAD) of MoFA,

mentioned lack of access to extension services as one of the constraints women encounter in agricultural development (Korang-Amoako, 1997 and Tetebo, 1997).

Basically, extension agents base their services on the voluntary will of farmers to avail themselves for teaching. This situation of reciprocal interaction thrives on stable and cordial relationship. Since access to extension services involves a relationship between extension agents and farmers, they have to have contact with one another for an interaction to take place for the establishment of the relationship. According to Luthans (1989) when there is less interaction among people, they share fewer activities and as a result share less sentiments, among them and consequently have poor relationship. The general observation is that extension agents have been male biased in the discharge of their activities. This had been to the disadvantage of women farmers. There is, therefore, the need to look at the concept of gender relations in extension delivery to ascertain the nature of the status quo. It is hoped that when the facts about the issue are laid bare, more effective strategies for reaching women farmers could be developed.

The expectation is that, the implementation of strategies so developed would improve upon the mutual access of extension agents and men and women farmers to one another, in a more equitable manner. If successful, the expected impact is that there would be higher rates of transfer, adoption and use of appropriate technological information. This could result in the improvement of the productivity of more farmers at the micro level and agricultural productivity in general, at the macro level.

1.2 Extension Service and the Gender Issue

Bortei-Doku, (1984) reported that, the extension service in Ghana started in the colonial era, based on export commodities, cash crops, namely cocoa, oil palm and rubber. It was later expanded to include food crops and livestock. The cash crops were owned by heads of households, mostly men who were the registered members of the cocoa co-operative societies and attended the meetings. (Bortei-Doku, 1984). The implication is that extension started with a bias, although not explicit, towards men farmers. Gura's (1985) observation was that, extension does not reach women because of the concentration on cash crops, which is usually owned by men. Although the cash crop farms were owned by men, women worked on them and also cultivated food crops that were not covered by the extension service at the time. Spring (1985) observed that, although women work on both food and cash crops and participate in many farm operations, it is commonly believed that men do all the work.

In an interview with Kwawu in 1995, she narrated that, in 1959, two Ghanaian ladies were sponsored by the USAID to The United States of America, to study Home Economics Extension. The purpose of the study was two-fold:

i. to address the issue of gender imbalance in extension delivery in Ghana and
ii. to establish a holistic extension approach, targeting the farm family.

According to Kwawu (1995) on their return they introduced Home Economics in the curriculum of the Agricultural colleges for females in place of agricultural mechanisation for male students. In 1966, the Home Extension Unit, of the Department of Crops Services of the then Ministry of Agriculture (MoA) was established with the mission of

targeting women and the youth. The effort of this unit was concentrated on Home Management, Nutrition Education, Income Generating activities, Backyard Gardening and Youth Programmes (JICA, 1993).

In 1987, the Medium Term Agricultural Development Programme (MTADP) was instituted to promote increase in agricultural productivity. Institutions, strategies and facilities were put in place for this purpose. The strengthening of the research sector, the restructuring of MoA into technical departments and the establishment of the DAES were among the efforts made.

The DAES was charged with the responsibility for accelerating the growth of the agricultural sector under the MTADP, (NAEP, 1992). The achievement of this objective is based on bridging the information gap between researchers and farmers, facilitating the use of research findings by farmers, presenting farmers production problems to researchers, providing feed-back and facilitating linkage of the two systems as shown in fig 1 below.

Fig.1 Extension – Farmers linkage and links to Research

With the establishment of the DAES in 1987, the Home Economics Unit became the Women Farmers Extension Unit (WFEU), with additional responsibility for providing

extension service for women's field production activities under DAES. The WFEU also engaged in food crop utilization, especially, soya bean, and post harvest activities. The DAES in effect had two parallel extension systems, namely, General Extension with Front-line Staff (FLS) providing service to all farmers including women and the WFEU attending to women specific activities only. This unit was staffed by females resulting in a situation of gender targeting, female intra-gender extension agent-farmer relationship. The unit reached women but the coverage was limited due to its low staff strength.

On the implementation of the NAEP in 1992, the WFEU was made a technical department, and changed its name to Women in Agricultural development (WIAD). WIAD is responsible for assisting MoFA in:

> ... the formulation of relevant policy measures for rural women, and provides special programmes for women farmers on nutritional improvement of families, processing, storage and utilization of agricultural products and household economy (JICA, 1993:30-31).

This Unit like all technical departments is required to provide Subject Matter Specialists (SMS) to train Front-line Staff (FLS) in women specific activities. It had no Frontline staff and therefore its function of direct contact with women was eroded.

1.3 Extension Practice

In the practice of agricultural extension in Ghana, many institutions, both Governmental and Non Governmental including the various Technical Departments of the MoFA had at one time or the other attempted an extension approach aimed at increasing agricultural productivity. The approaches had ranged from technology transfer, through

farmer training, out grower schemes to input delivery, mostly using the FLS of DAES (Geker et al. 1990 and Bagchee, 1993).

Although all the institutions aimed at increasing agricultural productivity, their objectives and strategies were varied and uncoordinated. This state of affairs was observed to be creating confusion since the same farmer was being influenced by different people on aspects of his agricultural production. The observation was that, such circumstances lent itself to the possibility of contradiction, which could lead to confusing the farmer (Geker et al., 1990).

To streamline extension delivery in the country, the Unified Agricultural Extension System of Ghana (UAESG) was instituted. This was part of the World Bank sponsored NAEP, initiated in 1992. The Extension approach to be used was the Training and Visit System (T&V).

Unified extension was conceptualised in two ways

i. that all organisations carrying out extension activities should co-ordinate with the DAES to ensure that messages sent to farmers are not contradictory.
ii. that only one FLS of the Department of DAES could deliver messages directly to farmers.

The Ministerial Directive on UAESG dwelt on the second and stated that

> Under the UAESG only one extension agent, called Front-line Staff of DAES could deliver technological messages on crops, animal husbandry, fisheries,

> agricultural mechanization, irrigation extension, nutrition and home economics to farmers (Obimpeh 1992:8&9).

It further stated the approach to be adopted that is:

> The FLS is to assist farmers' groups to identify their farming and related support problems, plan programmes and assist to implement such programmes using relevant technologies acquired through SMS Training and demonstrations (Obimpeh, 1992:8&9).

Among the objectives of the UAESG was the special emphasis that should be placed on reaching women farmers. Inspite of this objective and the high degree of women's participation in agricultural activities women farmers are not being reached to the same degree as men (Korang-Amoako, 1997 and Tetebo, 1997).

The T&V system requests an FLS to form 16-24 groups of 7-15 farmers, within his/her sub-district of 8 operational areas. These groups, known as "contact groups", are expected to be visited fortnightly by the FLS to deliver relevant extension messages, organise demonstrations, and develop technologies, and programmes (NAEP, 1992). Keller's (1985) account of the T&V system in Kenya indicates that none of the extension workers identified a female contact farmer.

Duncan (1996) in a survey on Women in Agriculture (WIA), that covered four regions of Ghana, found that apart from the Volta region that recorded 58% extension-women contact rate, women have low extension contact rates of 3% in Northern, 32% in Brong Ahafo and 15% in Ashanti Regions. The reasons given for this observation were:

1. That extension officers tend to favour male farmers (Kuenyehia, 1996).

2. That a degree of confusion exists as to whether the extension officer is to visit them or whether they are to approach him or her.

3. That extension services to some respondents are not beneficial.

4. In some cases, respondents are influenced by the sex of the extension officer. Some (especially in Ashanti and Volta Regions) said that they would prefer a female officer. Some of the reasons given for the preference was that females would be more understanding, whereas others (predominantly in the North and Brong Ahafo) who preferred male extension officer, stated that a male extension officer would be more willing to cover long distances into their farms.

5. Very few stated that their husbands might object to a male extension officer assisting them and they would be forced to give in to their husbands' demands. (Duncan, 1996:105)

Other explanations as to why women are not reached in extension activities, as they should were given by Saito and Spurling (1993:9) that:

> Despite women's increasingly important role as agricultural producers, agricultural research and extension services usually assume that farmers are men. Extension messages are not developed in response to the needs of women farmers and tend not to reach women.

Efforts at reaching women farmers were attempted under general extension and WFE with gender neutral and gender targeting approaches respectively. As already stated, few women were reached under general extension but with the gender targeting approach of WFE women were reached, although the coverage was low. The unified extension system lacks the gender-targeting element and therefore has eroded the success made under WFE.

The lack of success with this strategy may be attributed to lack of knowledge and understanding of the relationship between household organisation and different modes of agricultural organisation. The household organisation has been modelled by researchers and statisticians on the Western concept of household as a unitary whole with sexual division of labour. The African households however, have characteristics like non co-residence of couples with the women visiting their husbands, separate accounts, separate land for their farming activities, with the men and women having different responsibilities and expenditure patterns. The concept of female head of household is also prevalent in rural communities. Rural households in Ghana usually are composed of smaller household units within a compound. Usually the most senior male or the endowed is the head of the household or compound and these are the people extension agents contact. The agents' assumption is that the information given to the heads would reach other members. The men do not often pass on the information and when they do it is distorted. Understanding this relationship is important for the development of relevant policies and strategies that could lead to appropriate extension delivery (Ardayfio-Schandorf, 1997 and Schuh, 1997).

1.4 Research Problem

Reaching women farmers, is a general problem in extension delivery. It is a general observation that extension-women farmer contact is low (World Bank, 1994). The low extension-women farmers' interaction has been attributed to factors such as male biased extension agents and researchers, who operate as if all farmers are a homogenous group of people specifically men. It is also fostered by lack of women

specific strategies and coupled with constraints such as limited availability and accessibility to capital, land and suitable technology that would address their needs. Additionally, unfavourable land tenureship, child bearing and nurturing, time consuming household chores, socio-cultural factors and lack of acknowledgement of the woman's role in agriculture all contribute to the status quo, as observed by Jiggins (1986) and Saito and Weidemann (1990). In a paper presented by the Director of DAES, Ghana at the WAIHFS workshop in 1996, he stated that women farmers access to technological innovations has constraints. He attributed these constraints to:

i. socio-cultural factors that are incompatible with the extension delivery,
ii. poor education of women and
iii. poor technology dissemination practices by extension services (Korang-Amoako, 1997).

Many attempts at making extension reach women farmers have been made. These include gender targeting as in the case of the WIAD, and Non Governmental Organizations (NGO's) such as the International Fund for Agricultural Development (IFAD). In the case of IFAD, provision of credit, inputs and assistance in marketing is sponsored under the Agricultural Rural Development Project which have specific women participation components, for example Small Holder Credit, Input and Marketing Project in Ghana. Approaching women in groups, such as Farmer Clubs in Malawi (Bagchee 1993); and 31st December Women group in Ghana; and increasing the number of female agents, as in the case of the *Mission de Developpement de la Province du Nord-Ouest* (MIDENO) Project in the Cameroon as reported by Walker

(1990) have been practised successfully. Collaborative programme development between agents and women has also had successful impact on improving extension delivery to women in Bangladesh (Natpracha and Williams, 1985).

All the successful attempts discussed so far had an element of gender targeting. The unified extension system as already stated, lacks gender targeting. Reaching women farmers would suffer if strategies were not put in place to forestall it. However, the female agent population in Ghana is very low. Out of the 10 districts, representing the 10 regions of Ghana surveyed by Fiadjoe et al. (1997) while assessing the unified extension system of Ghana; the extension agent distribution by sex observed was 88% male and 12% females.

From the above discussion, it can be seen that gender targeting, particularly the use of intra-gender relationship is important for ensuring that agents reach women farmers. However, the extension agents in Ghana are mostly males and irrespective of their gender, they are expected to reach both the men and women farmers in their sub-districts, it is therefore, important that the concept of gender relations is studied to ascertain its nature in extension delivery.

1.4.1 The research question

In the above section, it has been stated that extension agents contact more men than women farmers. The implication is that more men participate in extension activities than

women do. The low participation of women in extension activities has been linked to gender.

The study is therefore aimed at investigating why extension agents contact more men farmers than women farmers.

The research question is: How does the issue of gender relations between extension agents and farmers influence extension delivery?

1.4.2 Objectives

The main objective is to find out **the nature of the influence of gender relations on extension delivery.**

Specifically, to determine:

i. the frequency of interaction between male and female extension agents and their men and women farmers'
ii. the duration of interaction between male and female extension agents and their men and women farmers,
iii. the intensity of sentiments in the interaction between male and female extension agents and persons and women farmers,
iv. the context and degree of involvement of men and women farmers in activities male and female agents undertake with them,
v. the sentiments associated with the interaction between male and female agents and men and women farmers,

vi. the influence of ecological factors on gender relations in extension delivery,

vii. the level of participation of men and women farmers in extension activities conducted by male and female agents,

viii. the relationship between level of participation in extension activities and nature of relationship between male and female agents and men and women farmers.

CHAPTER 2

CONCEPTUAL FRAMEWORK

2.0 Introduction

This study is aimed at finding out how gender relations between extension agents and farmers influence extension delivery. The conceptual framework for the study is presented in this chapter. The main concepts for the study are gender and extension delivery. The concept of gender is presented with respect to men and women farmers and male and female agents' roles and responsibilities. Extension delivery is presented as a social interaction, with the establishment of relationship between agent and farmers. Relationship is viewed as consisting of interaction, sentiment and activity spiral influenced by ecological factors. Participation in extension activities is conceptualized in terms of the social activities, demonstrations and production activities extension agents carry out with farmers.

2.1 Gender

Gender is the self-concept of a person being male or female. It is different from sex, which is a static biological attribute based on natural characteristics, which are complementary, different and perform roles in reproduction and infant nurture. As opposed to sex, gender is a dynamic social factor that describes feminine or masculine behaviour; it is the socio-cultural differences in role expectations, obligations and constraints as spouses, parents, etc. (Bortei-Doku 1992; Oppong 1996). According to Lawson and Clarke (1986) every society has specific ways in

which males and females are supposed to behave. Chitambar (1973) intimates that the behaviours of people depend on their value systems and the relative worth of the value systems. The value system prescribes the roles and responsibilities of individuals in a society.

2.1.1 Gender roles

Men and women have different statuses in society, correspondingly, expectations regarding the proper behaviour, attitude and activities of men and women differ. These expectations are referred to as gender roles (Schaefer, 1989). Gender roles are a set of behaviour expectations (norms) for males and females that are culturally defined (Myers, 1990).

The segregation of the roles and responsibilities of men and women farmers by gender is referred to as **gender analysis.** It reveals the roles and responsibilities of men and women farmers, both on the farm and at the household levels, which they are expected by society to fulfil. The requirements necessary to fulfil these expectations define their needs.

Need, the difference between what is and what ought to be, may be satisfied personally, by an individual, with assistance from neighbours or agents of institutions with the requisite knowledge, such as an agricultural extension agent in the case of the farmer. The facilitation of assistance with the need situation, requires that the extension agent knows what the farmers' needs are and that the

farmer is also aware that the agent has the capability of assisting with the satisfaction of these needs. This calls for positive mutual relationship between agents and farmers.

2.1.2 Gender relations

Relations imply interpersonal interactions. It is the medium for performing roles and responsibilities. Roles and responsibilities of men and women differ because of the influence of gender on them. Gender relations between men and women are likely to differ.

The establishment of this relationship is influenced by socio-cultural factors, economic factors, human capital, physical resources and the farmers' perception of the extension services and their agents, among others.

The concept of gender relations in this study was measured by the dynamics of the interaction between:

- men farmers and extension agents (male and female)
- women farmers and extension agents (male and female)

involved in extension delivery. The dynamics was measured in terms of attitudes, behaviours, roles and responsibilities.

2.2 Extension Delivery

Extension is defined by van den Ban and Hawkin (1988:312) as, "A form of conscious social influence. The conscious communication of information to help people form sound opinions and make good decisions".

It is usually carried out by an organisation. Roling, (1990:49) defines extension as, "A professional communication intervention deployed by an institution to induce change in the voluntary behaviour of a presumed public"

Boone (1980:14) defines a delivery system as "an organisational and administrative mode for providing learning opportunities". This involves interaction between individuals.

Extension delivery therefore refers to an organisational and administrative mode of providing learning opportunities by professional, conscious, social influence aimed at helping the target public to form sound opinion, make good decisions and voluntarily change their behaviour. (Schaefer, 1989) notes that it is essentially a social interaction between extension agents and farmers. Social interaction involves the mutual and reciprocal influencing by two or more people of each other's behaviour. According to Schaefer (1989), a relationship develops when a social interaction continues so long that a person becomes linked to another by a relatively stable expectation.

This process of extension delivery is not intermittent but gradual and repetitive spanning over a period. A condition that precede the development of a relationship

The extension agent-farmer relationship is an instrumental relationship, because it has as its ultimate function the performance of a task. According to Bennis et al. (1968) there is the need for agents of service organisations to enter into relationship with the recipients of the service, to have someone for whom to perform the service. Extension, as a social work, therefore uses this relationship as a major tool for its work process.

The views of van den Ban and Hawkins (1988) and Swanson (1984) are that the efficiency and effectiveness of an extension agent depend on the existence of a mutual relationship between him/her and the farmer. The farmer must have confidence and trust in the agent, who must show that he has interest in the farmer as a person, his situation and also his ideas, to gain the farmers trust. According to Davis (1966:91) "social relationships are a factor in the acceptance of new ideas and attitudes".

Since the extension agent-farmer relationship is instrumental, they must participate in some tasks.

The concepts of relationship and participation are therefore used to gain insight into extension delivery.

2.2.1 Relationship

According to Howard (1993:131) relationship is a term used for "any regularized pattern of action between individuals" Coyle, (in Compton and Galaway, 1994:273) defined

relationship as "a discernible process by which people are connected to each other, and around which the group takes shape and form". Northen (in Compton and Galaway, 1994:273) described relationship as "consisting primarily of emotional responses which ebb and flow from person to person as human behaviour evokes different affective reactions. Relationship is essentially a social interaction, which involves the "dynamic interplay of forces in which contact between individuals and groups result in a modification of attitudes and behaviour of the participants", is the view of Sutherland, (1961 in Chitambar, 1973:265). Hinde's (1979) perception of relationship is that it implies a series of interactions between two people, involving some degree of mutual interchanges over an extended period of time.

Charon (1990) observed that relationships are culturally defined and socially sanctioned. They are associated with social exchange and consequently, regulated by norms which Mabry and Barnes (1980:10) described as, "the constraints on members as to how they must behave in a group and the attitudes to be held towards the group." These norms, Homans (1958) noted, develop as members interact and are influenced by other social constraints that define the group's place in the larger society. Compton and Galaway (1994) stated that in a group situation, the social worker develops a unique relationship with each member, the nature of which is based on an understanding of the individual.

According to Homans (1951:119). "Interaction between persons leads to sentiments of liking, which express themselves in activities and these in turn mean further

interaction". The interaction, sentiment and activity complex form a spiral the direction of which characterises a relationship between two or more persons.

Interaction is defined by Boone (1985:15) as:

> The reciprocal contact or interstimulation and response between individuals and groups. Four characteristics of interaction are (1) plurality of actors (two or more); (2) communication between actors by means of symbols; (3) a duration or time dimension possessing a past, a present, or a future, which, in part, determines the character of the ongoing action; and (4) an objective, whether or not from the standpoint of the actors, its specifications coincide with that of an objective observer.

From the discussion so far can be inferred that relationship is implies interaction associated by sentiments and activities and influenced by the environment in which the interaction takes place.

Since interaction involves 2 or more people involved in mutual inter simulation and responses, participants involved in an interaction may be classified as a group. This is because according to Baron (1986:250) "a group is a collection of two or individuals interacting with a stable pattern of relationships between them who share common goals and who perceive themselves as being a group".

Sentiments are defined by Geddes and Grosset (1996: 527) as "the feelings, awareness or emotion; the thought behind something; the tendency to be swayed by feeling instead of reason. Little et al. (1950) defined sentiment as the personal experience, ones own feeling with regard to something it is a mental attitude of approval or disapproval. An opinion or view of what is right or agreeable, an emotional regard to

ideal considerations as a principle of action or judgement. According to Chitambar (1973) sentiment is the feeling associated with social contact which is experienced as "reciprocal response and 'an inner adjustment of behaviour to the actions of others [Sutherland 1961]"

Activity Geddes and Grosset (1996) described activity as an energetic, lively operation reason. The state of being active, the process of exerting energy or influence over time. (Little et al. 1950)

In the attempt to understand the relationship between persons several theories and models have been advanced. They include the Propinquity theory, Homans theory of group formation, Balance theory, Exchange theory, Interaction theory Field theory, General Systems theory and Malekzte model of the mass communicating man, which are explained below. All of the theories and models with the exception of the general systems theory gives a partial explanation of relationship or group behaviour to the exclusion of others.

The theory of propinquity, discussed by Luthans (1980:371) states that "individuals affiliate with one another because of spatial or geographical proximity". Although proximity facilitates interaction, it cannot singularly explain interaction that could result in the establishment of relationship for as (Chitambar 1973:266) observed, "social contact as distinct from physical contact, exists when there is reciprocal response

and 'an inner adjustment of behaviour to the actions of others' [Sutherland, 1961:99]". Homans theory takes care of the social aspect of the interaction.

Explaining Homans(1950) theory of group formation Luthans (1980:371) stated that:

> The more activities persons share, the more numerous will be their interactions and the stronger will be their sentiments (how much the other persons are liked or disliked); the more interactions among persons, the more will be their shared activities and sentiments; and the more sentiments persons have for one another, the more will be their shared activities and interactions. ... Persons in group interact with one another, not in just the physical propinquity sense but also to accomplish many group goals such as co-operation and problem solving.

Homans theory of group formation therefore implies that, relationships develop when people interact with one another sharing activities and during the process develop sentiments of like or dislike between them. Interaction, sentiment and activities are therefore the medium of relationship between individuals, the basic unit being a dyad. The Homans' theory does not however, explain the basis of the interaction, this is accomplished by the balance theory.

The balance theory of Newcomb (1961) as stated by Luthans (1980:371-372) is that "persons are attracted to one another on the basis of similar attitudes towards commonly relevant objects and goals". This is collaborated by Adair (1990) as shown in Fig 1 (See p.6). This theory too does not indicate the outcome of the interaction, which is taken care of by the Exchange theory.

The exchange theorist's view of human interaction is that they are transactions based on reward maximization and cost minimization. They observed that, "relationships are formed and maintained because people perceive their potential rewards as greater than the cost of maintaining the relationship". Exchange theory dwells on the dynamic nature of the mutual interaction and behaviour on relationship but does not explain its social elements, which the interaction theory attempts to do.

Interaction theory according to Mabry and Barnes (1980:13) states that:

> A social structure exists when some sets of expectations develop between participants in regard to their role relationships and interpersonal reactions to each other. A person's group role is determined by his actions and the relative value that activity attains in the eyes of other members.

The theory attempts to explain the social structure that develops between group members, with each member taking on roles and responsibilities and others expecting their fulfilment. This is in consonance with Ruddocks' (1976) contention that, individual behaviour varies with changing roles and self-image and that whenever individuals enter into a relationship, a role is adopted which is the agency of the relationship. He further stated that self-image proves to be partly dependent on the reflected views of others and that personality comes into existence only in relationships.

The assumption on which the Field theory is based as explained by Mabry and Barnes (1980:10) is that:

> Group behaviour involves a constant balancing of goals held by each group member, constraints placed on fulfilment of individual goals by the goal(s) of the group and the demands made on the group by its external environment.

In this theory, relationship is explained in terms of the elaborative effect of environment or context on behaviour towards the achievement of goals of the participants.

Relationship may be classified as a social system for according to Mitchel (1968) a social system consists of two or more individuals interacting directly or indirectly in a bounded situation oriented to a common focus or interrelated foci. He further explained that social systems are open systems exchanging information with and frequently interacting with other systems.

The above discussions on the theories explaining so far explain aspects of relationship. Relationship as a social system, may therefore be explained in terms of the General systems theory, which is according to Stogdill (1959 in Mabry and Barnes) is a method of explaining relationship by putting all other explanations together, since one theory alone is unable to adequately explain it. He described relationship as group achievement, which according to him, may be viewed in terms of inputs, throughputs and outputs.

According to Stogdill (1959 in Mabry and Barnes, 1980:19)

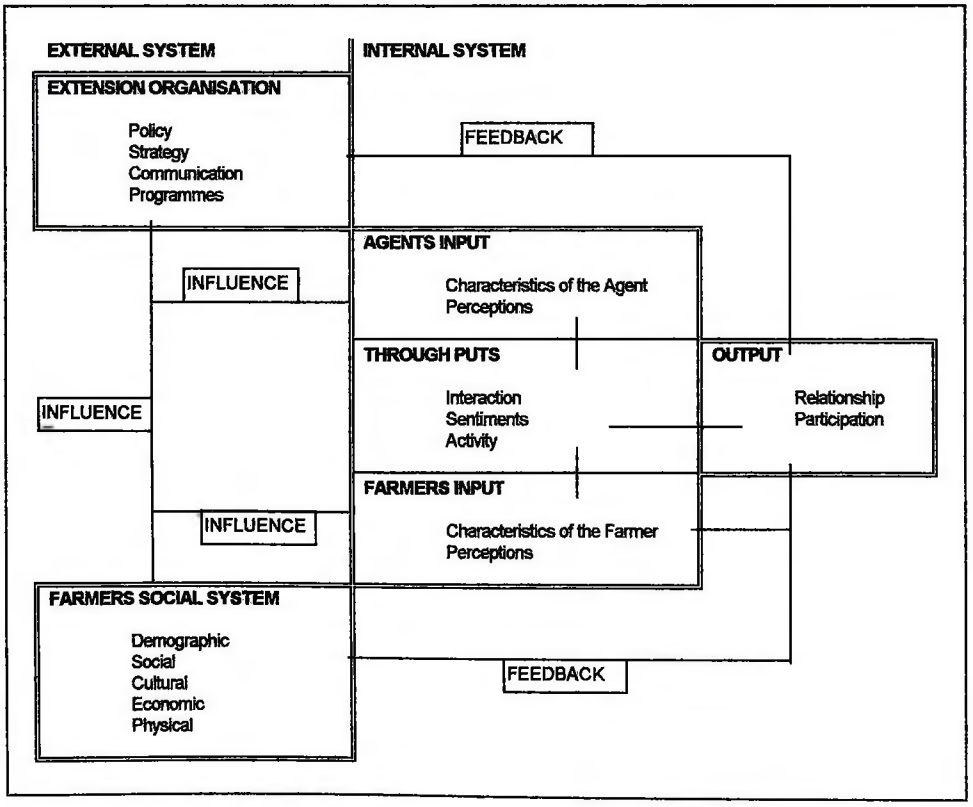
> Group inputs are composed of member characteristics (such as their personalities, attitude, abilities) goals, related tasks, and physical and social environmental, factors associated with places where members interact. The throughputs of a group are those elements of behaviour that facilitate or impede progress towards a goal. The primary element of the throughput is communication between group members. Simultaneously, as members are involved in communicative exchanges, they also develop positive and negative impressions of one another, new role and status relationships, coalitions and patterns of influence related to group outcomes. These are elements of group systems integration they develop as people communicate and are modified through communication. The output dimension of a group includes both tangible and intangible results of group work. Tangible results from the point of goal

attainment can be viewed in terms of whether the group's task has been accomplished. The intangible may be change in attitude, work styles or other behaviour.

Considering the above presentation, the agent-farmer relationship may be modelled as an open system as shown in Fig 2 below. It consists of an external system, the extension organisation and farmers social systems, which modifies the internal system, comprising the agent and farmers' inputs, throughput of interaction, sentiment and activities and output of relationship and participation

Figure 2

A MODEL OF EXTENSION DELIVERY
AS
A SYSTEM



The agent-farmer relationship therefore, entails the elements of interaction, sentiments, and activities between the participants and the mutual influence each of these elements has on one another other. The effects of these elements are elaborated by factors of the external system like demographic, physical, cultural, social and economic factors as shown in Figure 1 above.

In the explanation of relationship the systems theory dwells on the social processes and variables involved in the relationship, like antagonistic and associative processes that build, direct and give it meaning.

Levenson (1974) explained that relationship, being a social interaction may be measured by using the three measurable aspects of interaction, namely:

i. Frequency-how often the interaction takes place.
ii. Duration-the amount of time used in interacting.
iii. Intensity refers to the degree or strength of interaction.

He also mentioned that the ecological factors like the demographic, socio-economic and socio-cultural factors that influence the interaction must be measured. These include:

i. Size and distribution of the population.
ii. Factors of growth and decline of the population, geographic mobility
iii. The composition of the population that is the age, sex, education, marital status, occupation, income, ethnic background, etc.

The frequency, duration and intensity of interaction, demographic and ecological factors influence the dynamic nature of the interaction situation. To answer the behavioural question, Levenson, (1974) states that there must be an attempt to describe and explain:

i. The nature of the activities being conducted.

ii. The purposes and consequences of the individual acts being performed.

iii. The modes of interpersonal and/or inter group relations, which are on going.

The mode or context of interaction is also important in determining the nature of relationship. Bennis et al. (1968) classified the mode of interaction into friendly co-operative; friendly competitive, antagonistic competitive; and antagonistic co-operative interactions. Levenson (1974) classified, social forms or forms of interaction into associative processes - accommodation, co-operation and assimilation and antagonistic processes - competition, contravention and conflict. The associative processes tending to draw people together while the antagonistic processes tend to cause people to act against one another. Bennel (1989) said that relationship between linkage groups could be categorised. In his categorisation he defined the possible types of relationships that can exist between extension agents and farmers to varying degrees are follows:

i. co-operative-collaboration when both the agent and farmers are strongly motivated to interact effectively;

ii. conflictual-engagement if there are negative feelings and attitudes between them, associated with open confrontation;

iii. conflictual-avoidance where the negative feelings and attitudes are associated with the agent and farmer avoiding interaction with each other; and

iv. indifference where the motivation for interaction is none existent or insignificant.

The nature of relationship was investigated under the variables:

i. Frequency of interaction, how often the agent visits the farmer;

ii. Duration of interaction, how long the agent stays with the farmer when he visits;

iii. Intensity of interaction, the number of people involved in the interaction and the sentiments expressed by the subject for their counterparts;

iv. Quality of interaction, that is, the nature, purposes and consequences of the activities undertaken and the mode of interpersonal or group interaction, that is voluntary or coercive applied;

v. Demographic issues such as age, marital status, ethnicity, land tenureship population and its density;

vi. Ecological issues such as how other members of the community influence whom a man or woman can interact with and the prevailing norms that influence the nature of relationship.

2.3 Participation

Participation means to partake or share in an activity, or co-operate with others in the performance of an activity. Aldag and Steam (1987:75) define participation as "being at work to do the job". According to Cohen and Uphoff, (1988:219) "participation can be regarded generally as the involvement of a significant number of persons in situations or actions which enhance their well being, for example their income, security and self esteem". To participate in an activity, one must make an effort, which is the behaviour directed towards a goal. The achievement of the goal, depending on ability, situational constraints, and comprehensibility of what is to be accomplished.

Ability is the capacity to perform an activity. Ability can be intellectual for problem solving; mechanical capacity to comprehend relationship between object and how to manipulate parts to fit together; and or psychomotor, that which involve skill for performing an activity.

Extension delivery involves interaction between agents of the DAES and men and women farmers. Extension agents and farmers must have mutual access to each other, by means of a stable and cordial relationship to be successful. Since this interaction is voluntary, attempts at understanding the factors that influence it, particularly the behaviour responsible for the low women's participation in extension activities is important for the development of strategies to address the problem.

CHAPTER 3

METHODOLOGY

3.0 Introduction

In this chapter the techniques employed to arrive at the outcome of the study are reported. The report covers the choice of methodology, site, population, sampling techniques and how the samples were obtained. The processes used for instrument development and administration; and data analyses are also presented.

3.1 Research Methodology

The research methodology used in the study was the causal-comparative approach. Fraenkel and Wallen (1993) outlined some characteristics of causal-comparative methodology that include that the approach:

i. seeks to find association among variables.
ii. Attempt to determine the causes or consequences of differences that already exist between or among groups of individuals.
iii. Begin with a noted difference between the two groups and then look for possible causes for, or consequences of this difference.
iv. Relationship can be identified but causation cannot be established.

The main objective of the study, which was, to find out the nature of the influence of gender relations between extension agents and farmers on extension delivery satisfied the above conditions for reasons outlined below:

i. The study aimed at 'finding an association between gender and relationship', which tallied with the first condition.

ii. Differences - 'the relatively low extension contact with women farmers as opposed to men farmers and the advocacy for gender targeting with female agents playing a leading role in the bid to reach women farmers', was already in existence.

iii. The bases of the study, which was to find an explanation for a noted difference between extension contact with two categorical groups, namely, men farmers and women farmers', satisfy the third condition.

The study was therefore fashioned in conformity with conditions that relate to the causal-comparative methodology.

3.2 Location of the Study

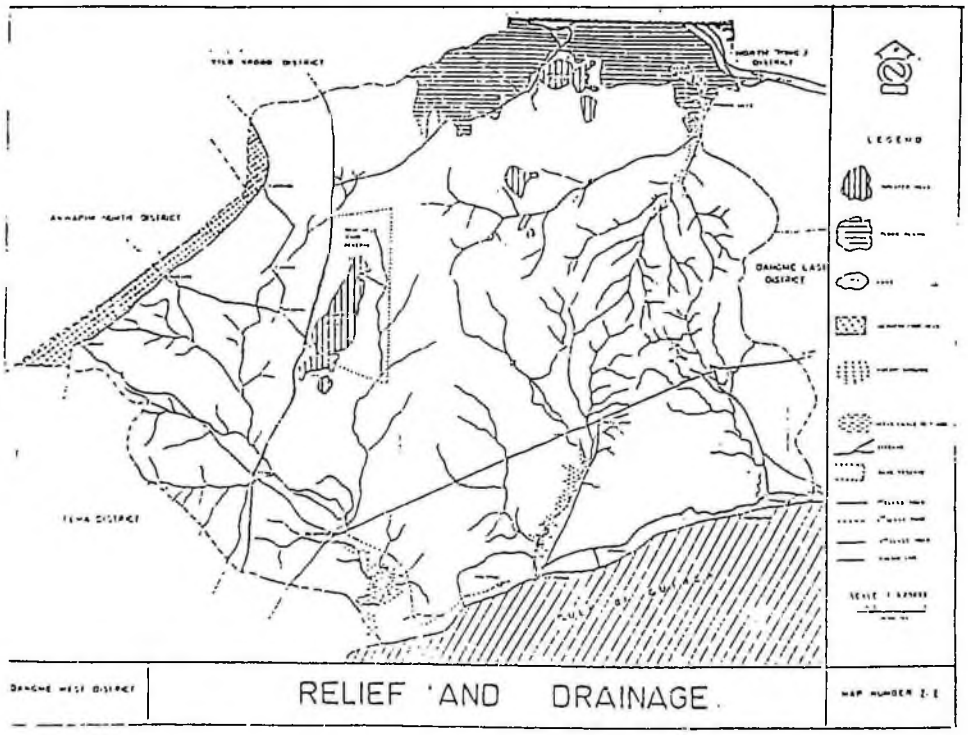
The location for the study is Dangme West District, an easily accessible and a well-known rural area to the researcher with the following characteristics:

> Dangme West District is situated in the South-eastern part of Ghana, lying between latitude 5° 45' South and 6° 05' and longitude 0° 05' and 0° 20' West (See Fig 3). It has a total land area of 1,442 square kilometres, making it the largest in the Greater Accra region. The land size represents 41.5% of the regional land area. The District capital is Dodowa (DPCU, 1996:1).

Its boundaries are:

North East	North Tongu District
North-West	Yilo Krobo District
West	North Akwapim District
South-West	Tema District
South	Gulf of Guinea
East	Dangme East District

FIG.3 MAP OF DANGME WEST DISTRICT



It has a cultivable land area of 129,6000 hectares with 45,600 under cultivation, and average farm size of 2.5 hectares (6 acres). The sex ratio is 93 males to 100 female. Sixty-five per cent of the labour force is engaged in agricultural activities. The projected population is 96,586 for 1995 (DPCU, 1996).

The major crops cultivated by all the farmers, both male and female are maize, cassava, pepper, okra, tomatoes, watermelon and onions. Rice is cultivated mostly on the irrigation projects at Asutsuare and Dawhenya in Osudoku and Prampram Traditional areas respectively, and other wet, low lying areas.

There are lots of cattle in the District managed by Fulani herdsmen and owned mostly by the men. There are also poultry and pig kept under intensive management by both men and women. Additionally, the women take care of the backyard poultry, pigs, sheep and goats that are normally managed under free-range conditions.

3.3 Site Selection

Initial visits were paid to the staff of the DAES to introduce and explain the research to them and solicit their participation. With the permission the District Agricultural Extension Officer (DAEO), a scheduled visit was made to the District Office at Dodowa, on a fortnightly meeting day. After introducing the purpose and coverage of the study to the FLS, they were asked to indicate whether their predecessors were of the opposite sex. Four males and one female agents who met this criterion

were identified. This was to ensure that farmers sampled had had experience with both male and female agents.

A list of the villages in the areas where they operated was prepared. In all twenty-four villages were listed, however, only ten of the villages were found to have farmers who had experienced the services of agents of both sexes. These were Henyum, Adumanya, Adjumadjian, Odumase, Abrampa, Abonya, Wedokum, Mataheko, Mobole, and Ataa Mensah.

3.4 Population

The population for the study comprised:

i. Farmers in Dangme West District.

ii. Front-line Staff of Dangme West District

iii. Directrate of the DAES

The Farmers. The people of Dangme West District are predominantly farmers, however, some of them engage in non-farming activities. The educated men engage in white colour jobs either locally or by emigrating to Accra or Tema (Diaw, 1994). Some of the farms owned by the men are managed mostly by the women, most of the time. Where the men are full-time farmers, their wives also own farms that they attend to after working on their husbands' farms (Personal observation).

Front Line Staff. There were seventeen Front-line extension agents at the District comprising three women and fourteen men who interact directly with farmers.

Directorate of the DAES. The Director and two Deputy Director of DAES.

3.5 Sample of the Study and Sampling Technique.

The sample of farmers selected for the study was based on acquaintance with extension agents. Non probability sampling, specifically purposive sampling was used in the selection of households from which farmers were interviewed. This sampling method was chosen because once an agent visited a household there was a higher possibility of the agent having equal access to both men and women in the visited household than households they did not visit. Attention was paid to ensure that both farmers who interacted regularly with the agents and those with minimal interaction were all represented. This was done to reduce threats to internal validity by subject selection bias (Fraenkel and Wallen, 1993). The population of agents was small and so all of them were involved in the study.

i. Farmers

   The sample comprised farmers and their spouses in households where agents visit. This was to ensure that views from farmers acquainted with agents of both sexes are represented.

ii. All FLS in Dangme-West District were made up the agents' sample.

iii. Deputy Director (Operations) DAES.

3.6 Data Gathering

The study was done using interview schedules for farmers (Appendix 1) questionnaire for agents (Appendix 2), and examination of secondary materials.

3.6.1 Instrumentation

The questionnaires used had both closed ended and open-ended questions. The closed-ended questions were developed for questions with responses that could easily be categorised. The open-ended questions were provided for the collection of responses that could not have been easily categorised before the data collection and also flexibility for unexpected responses.

To enhance the validity of the data collected, the concept of triangulation was used in the design of the questionnaire. The married respondents were provided with questions, based on their views in respect of their spouses.

1. The questions were developed from the conceptual framework based on the variables arising from the main concepts. These were compiled into questionnaire for FLS and an interview schedule for farmers. The concepts were:

   i. Gender

   All variables were segregated into masculine and feminine behaviour.

   ii. Relationship

   To answer the question of relationship, the variables measured were

   i. Interaction

ii. sentiment

iii. activities

iv. The ecological and demographic factors that influence the interactions were also measured.

2. The questions were reviewed by the researcher to test their appropriateness and adequacy.

3. The interview schedule and questionnaire were submitted to the supervisor and other colleagues for review and comments.

4. The farmers' interview schedule was pretested at Oyarifa a village in Ga district with similar characteristics as the study villages. Seventeen farmers were interviewed. The agents' questionnaire was pretested at Pokuase, on a fortnightly meeting day of the FLS. Sixteen extension agents participated. They comprised five females and eleven males.

(5) Further review by the researcher in consultation with the supervisor was made.

3.6.2. Training the enumerators

The questionnaire developed was also used in training the enumerators. This was done to ensure that the enumerators had a common understanding and presentation of questions. Four enumerators two males and two females were trained.

3.7 Data Collection Techniques

A timetable was made with the collaboration of the farmers and the extension agents for the interview. Their preference was taboo days, Mondays and Fridays when they do not go to the farm and on Sundays. On these pre-arranged days, all the farmers in the households where agents visited were interviewed. They were one hundred and six farmers.

The data was collected by conducting interviews for farmers because of their low literacy level. The agents were administered with questionnaire for completion.

3.7.1 Conducting the farmers interview

On the pre-scheduled days and time, the farmers and their spouses gathered at their usual meeting places, where they were interviewed individually and collectively.

The married respondents were requested to respond to questions on their farmer spouses' interaction with the male and female agents where the spouses are visited. Where an agent had not visited either the respondents or their spouses, they were requested to express their opinion on how they would like the interaction to be. This is in line with Schuh's (1996) observation that if data is collected on women alone, a large number of gender issues are lost. He suggested that for collection of data and the analysis of underlying relationships the household should be used as the basic conceptual unit.

The researcher and four trained enumerators moved as a team to the various villages on scheduled dates to conduct the farmers' interviews. General observations and difficulties were discussed for the necessary adjustments. Farmers were assigned to the enumerators based on the language they could communicate in more fluently. In five instances the services of interpreters were sought for farmers who speak Ewe, since none of the interviewers could speak Ewe.

The responses and general experiences with the administration of the instrument were discussed daily and strategies were developed to ensure successful data collection. Each interviewer audited and compiled his/her responses daily. In conference for eight days, the responses were discussed and coded. Meals were provided to avoid waste of time.

3.7.2 Administration of agents questionnaire

The agent's questionnaires were given to all agents, on a fortnightly meeting day at Dodowa to complete. Clarification of questions raised by the agents, where necessary, was made. The responses were audited immediately after collection. To ensure valid responses were collected.

The data collected was "examined for completeness, comprehensibility, consistency, and reliability" (Selltiz, Wrightsman and Cork, 1976: 108).

3.7.3 Interviewing the Deputy Director of DAES.

The Deputy Director (Operations) DAES was interviewed at his office.

Finally, documents with relevant materials were consulted for information for the data analysis.

3.8. Managing the Data

This comprises data analysis, presentation, and determination of the characteristics of the relationship between variables.

The responses and observations were coded into conceptual categories, and variables.

To assess the level of the agent-farmer relationship and farmers' participation in extension activities, the observed values of the variables that constitute the measurable aspects of interaction, namely, frequency, duration and intensity of the sentiments of the interaction and the various activities were given the following scores per case and computed:

$$I=\sum(fdi)$$

Where;

I = Intensity of the relationship

f = Frequency

Daily to Fortnightly intervals High = 1

Above fortnightly intervals Low = 0

d = Duration

Period spent beyond 4 hour High =1

Below 4 hours Low = 0

i = $\cdot\sum(spvra)$ = the intensity of the sentiments of the interaction

s = Feeling about visits by male and female agent.

Like = 2

Indifferent = 1

Do not like = 0

p = Discussing personal problems with the agent.

Discusses personal problems =1

Does not discuss personal problems 0

v = reciprocal visits to the agent

Visits agent = 1

Does not visit agent = 0

r = Number of people who receive visiting agent

One person = 2

Small group 2-8 people = 1

Large group 9= people =0

a = Number of people involved in activities with the agent

One person = 2

Small group 2-8 people = 1

Large group 9+ people =0

Participation (*P*)

Involved = 1

Not involved = 0

Scores for agents' interaction.

Frequency of interaction *(f)*

More frequent interaction with one group than the other = 2

Equal frequency of interaction with both groups = 1

Less interaction with one group than the other = 0

Duration of interaction (*d*)

More period of interaction with one group than the other = 2

Equal period of interaction with both groups = 1

Less period of interaction with one group than the other = 0

Intensity of interaction (*i*),

Where intensity of agents relationship $I = \cdot\sum(spr)$

Feeling about visits by male and female agent. (*s*)

Like = 2

Indifferent = 1

Do not like = 0

Discussing personal problems with the agent. (*p*)

Discusses personal problems = 1

Does not discuss personal problems = 0

Number/Class of people who receive visiting agent (*r*)

One person = 3

Small group with spouse = 2

With other household member =1

With other contact farmers =0

The Statistical Package for the Social Sciences Programme (SPSS) was used in the computer analysis of the coded responses. The responses were analyzed using percentages for frequencies of occurrence of the variables based on gender.

The findings were presented in the tabular form with cross-tabulation in percentages and narration where appropriate. Gender the independent variable was cross-tabulated against the components of the dependent variables that compose relationship and participation. The independent variable gender, with categories, men and women farmers that vary in their degree of contact with extension agents, and the dependent variable, relationships were under investigation. Relationship, however, is a dyadic property, (Hinde, 1979), therefore gender of the agent was matched with the gender of the farmer to determine the nature of relationship between;

i. male agents and men farmers,

ii. male agents and women farmers,

iii. female agents and men farmers,

iv. female agents and women farmers.

Multivariate analysis was used in the examination of farmers' responses. This was done controlling for knowledge and visits made by male or female agents to farmers and farmers' spouses. The responses of farmers who were visited by the agents and therefore had really experienced the interaction with male or female agents were treated as on-going relationships. The responses of those who were not visited were treated as possible and acceptable relationship, should a social contact be made with them. Although the use of multivariate analysis improved upon the quality of the analysis, it led to fragmentation of the sample into smaller units that ultimately had impact on the significance of the chi-square value. (This effect would be explained shortly.)

The presentation of the results were in the form of cross tabulation because the variables were categorical and also it was to ascertain whether the variables differ significantly for each value or level of the other variable. The minimum expected frequency values of the variables were computed and the necessary recoding of variables, where possible was done to ensure that the interpretation of significance of the chi-square statistic was valid (Alreck and Settle, 1985). The chi square and probability values of significance or non-significance that the observed difference in the sample could occur or not occur in the population was determined using Epi. Info programme. (Chi-square values at 5% are presented as Appendix 3.)

The chi square statistics for the variables were not determined with the intention of necessarily inferring the results back to the population because a non-random sample was used for the study. The basis for computing the chi-square statistic, was in accordance with the advice of Johnson and Joslyn (1989:268) that:

> ...when working with non-sample data, we must also generally be concerned with the statistical significance of our results since observed results may also be the product of random chance alone.

According to Mohr (1993:155-156)

> No matter what design or non design has been employed, the results of the test give the probability that one would have obtained a statistic in a certain range of magnitude if one had actually implemented a randomization or random sampling procedure (given the sample size and variance estimates that were obtained). Any non-significant result means that the relationship tested is so small (no matter what its raw magnitude happens to be) that it could fairly easily occur through the vagaries of a randomization or random sampling process.

... if a relationship is statistically significant, it means that it is so large that it could not easily have occurred as the result of random forces alone.

Several factors were taken into consideration before inferences were made about the results. The precaution was important because according to Snedecor and Cochran (1967), in deciding whether to reject or accept a null hypothesis, all available evidence as well as the specific results should be reviewed because sample size influences the significance or otherwise of the chi-square statistic.

The relationship between the main variables was determined by assessing the existence, direction, strength and significance of the variables based on the observed percentages and the statistical significance based on the chi-square values at 5% probability level (Johnson and Joslyn, 1989). The following models were developed to standardize the limits for the indicators.

The existence of relationship between gender relations and extension delivery was indicated "when the values of one variable co-vary with or are dependent upon the values of another variable" (Johnson and Joslyn, 1989:307). An example is shown in table 3.1 below.

Table 3.1 Difference in values for men and women farmers – [δ(MW)]

Variables	Men (M) %	Women (W)%
A	M1	W1
B	M2	W2
Total	MT	WT

Where M = men, W = women, T = Total and

$$\delta(MW) = (M1 - W1)$$

In this study if the differences in values of the independent variables, δ(MW), is 0 - 9.9% it means there is no relationship between the independent variable based on the level of dependent variable concerned. That is, the values are considered to be

behaving the same way on both the dependent and independent variables. This inference was reinforced by a significant chi-square statistic.

The strength of a relationship "refers to how different the observed values of the dependent variable are in the categories of the independent variables" (Johnson and Joslyn, 1989:274). It is "an indication of how consistently the values of a dependent variable are associated with the values of an independent variable" (Johnson and Joslyn, 1989:307). "The strongest possible relationship between two variables is the one in which the value of the dependent variable differs from that of every case in another category of the other" (Johnson and Joslyn, 1989:274). In this study, the following standards were set to assess the strength of relationship: δMW

Strong	δ(MW) above 20%
Weak	δ(MW) 10.0%- 19.9%

Additionally, the chi-square test of significance was used to support the indication of the strength of the relationship between the dependent and independent variables.

The direction of relationship is "an indication of which values of the dependent variable are associated with the values of the independent variable" (Johnson and Joslyn, 1989:306). A relationship is said to be negative "when high values of one variable are associated with low values of another variable"... . [It is positive] "... when high values of one variable are associated with high values of another variable." (Johnson and Joslyn, 1989:307). The direction of relationship was determined by ascribing high value to the most desirable variable, and ranking the other in descending order of desirability for a close relationship.

The association between gender relations and extension delivery was thus measured by a gender analysis of the concepts that constitute extension delivery, namely interactions, sentiments, activity, their mix and the influence of the social systems in which the extension delivery takes place.

CHAPTER 4

FINDINGS

4.0 Introduction

This chapter is a presentation of the findings of the study, analysed by gender relations. The presentation follows the conception of relationship as a system with internal and external components. The internal system consists of interaction, sentiments, activity and relationship. The external system comprising; the socio-economic and socio-cultural characteristics of the farmers; and the culture of the organization with respect to agent farmer relationship.

The findings on the level of participation by men and women farmers in activities conducted by male and female extension agents and the association of gender relations with relationship is also presented.

The data was aimed at finding whether there were differences between the association of the variables at agent farmer inter-gender and/or intra-gender levels. As indicated in the previous chapter, in this study, differences are established when the values for a variable for men and women vary [δ(MW)] by 10.0% or more. Values lower than 10.0% are considered as showing no differences. For the purpose of ease of presentation and indeed throughout the text, the terms 'male' and 'female' have been used in reference to extension agents while and 'men' and 'women' have been used with respect to farmers.

4.1 The Internal System of the Agent Farmer Relationship

The internal system comprising interaction, sentiments, activity and relationship represents the dynamics that take place between the agents and farmers directly.

4.1.1 Agent farmer - interactions

Interactions leading to the establishment of a relationship involve acquaintance, frequency of visits, period of time spent together and the sentiments or intensity of the interaction that characterises the relationship. These factors were investigated and the findings are reported in the following section.

4.1.1.1 Agent-farmer acquaintance

The agent-farmer acquaintance was measured by knowledge (physical contact) of the agent and visits (social contact) by the agent to the farmer.

Table 4.1 Farmers Acquaintance with Agent by Gender Relations- Farmers perspective

ACQUAINTANCE	MALE AGENT		FEMALE AGENT	
	FARMERS %(N)		FARMERS %(N)	
	MEN	WOMEN	MEN	WOMEN
PHYSICAL CONTACT				
Yes	91.9 (57)	95.5(42)	54.8(34)	68.2(30)
No	8.1 (5)	4.5 (2)	45.2(28)	31.8(14)
TOTAL	100.0(62)	100.0(44)	100.0(62)	100.0(44)
SOCIAL				
Visited by agent	82.5 (47)	69.0(29)	88.2(30)	70.0(21)
Knew agent not visited	17.5 (10)	31.0(13)	11.8 (4)	30.0 (9)
TOTAL	100.0 (57)	100.0(42)	100.0(34)	100.0(30)

Table 4.1 above shows the distribution of men and women farmers by physical and social contact between with male and female extension agents. Physical contact with the agent and gender relations showed no association; (δ(MW) was less than 10.0% at the male agent level. There was no difference men and women farmers with regards to knowledge of male agents. At the female agent's level of interaction, physical contact and gender relations showed an association that was positive and weak. It was low for men (54.8%) and high for women (68.2%) δ(MW) was 13.4%, that is, more women knew the female agents than men.

Social contact and gender relations exhibited a weak, positive association in the favour of men. The observed values were high for male-men (82.5%) and female-men (88.2%) social contact, and low for male-women (69.0%), and female-women (70%) social contact, δ(MW) was 13.5% for male agents' and 18.2% for female agents' social contact. This showed that more men than women farmers had interactions with both male and female agents inspite of the fact that more women than men farmers knew the female agent.

Table 4.2 below shows that all the respondents, except 30% of the men who were not visited, said the visits by the agents were necessary. No association between gender and necessity of visits were found at the other levels, δ(MW) was less than 9.9%. Most of the men and women farmers felt the visits were necessary. The reason given for the necessity of the visits bordered on dependency as shown in table 4.2 below.

Table 4.2 Necessity of Agents Visits to Farmers and Reason by Gender Relations.

VISITS	MALE AGENT				FEMALE AGENT			
	FARMERS VISITED %(N)		FARMERS NOT VISITED %(N)		FARMERS VISITED %(N)		FARMERS NOT VISITED %(N)	
NECESSARY	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN
Yes	100.0(47)	100.0(29)	70.0(7)	100.0(13)	100.0(30)	100.0(21)	100.0(4)	100.0(9)
No	-	-	30.0(3)	-	-	-	-	-
TOTAL	100.0(47)	100.0(29)	100.0(10)	100.0(13)	100.0(30)	100.0(21)	100.0(4)	100.0(9)
REASONS								
Guidance	36.2(17)	27.6 (8)	10.0(1)	23.1(3)	20.0(6)	19.4(4)	100.0(4)	22.2(2)
Help	4.2 (2)	3.4 (1)	10.0(1)	-	6.7(2)	-	-	-
Benefits	2.1 (1)	3.4 (1)	-	7.7(1)	3.3(1)	4.8(1)	-	-
Teaching	55.3(26)	58.6(17)	50.0(5)	61.5(8)	56.6(17)	66.6(14)	-	44.4(4)
Affiliation	2.1 (1)	6.9 (2)	-	7.7(1)	10.0(3)	4.8(1)	-	-
Official	-	-	-	-	-	4.8(1)	-	33.3(3)
Unnecessary	-	-	30.0(3)	-	-	-	-	-
TOTAL	100.0(47)	100.0(29)	100.0(10)	100.0(13)	100.0(30)	100.0(21)	100.0(4)	100.0(9)

Table 4.3 below shows a strong association between gender relations and visits by male agents to spouses of farmers. The degree of association was positive and high for the husbands of women farmers (80.0%) and low for wives of men farmers (58.1%). This is because δ(MW) was more than 20.0%.

Table 4.3 Visits by Male Agents to Farmers' Spouses by Gender Relations -Farmers perspective.

VISITS	FARMERS VISITED %(N)		FARMERS NOT VISITED %(N)		TOTAL SPOUSES VISITED %(N)	
	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN
Spouses visited	58. (18)	80.0(16)	11.1 (1)	28.6 (4)	47.5(19)	58.8 (20)
Spouses not visited	41.9 (13)	20.0 (4)	88.9 (8)	71.4 (10)	52.5 (21)	41.2 (14)
TOTAL	100.0 (31)	100.0 (20)	100.0 (9)	100.0 (14)	100 (40)	100 (34)

The implication from the above results is that more men were visited than women even when both of the couple is engaged in farming. In the case of the farmers who were not visited the association of spouses visited with gender was negative and low towards wives (11.1%) and high towards husbands (28.6%), the δ(MW) was 17.5%. That is more men were visited by the male agent than women.

Table 4.4 Visits by Female Agents to Farmers' Spouses by Gender Relations Farmers perspective

PHYSICAL CONTACT	FARMERS VISITED %(N)		FARMERS NOT VISITED %(N)		NUMBER OF SPOUSES VISITED %(N)	
	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN
Spouses visited	66.7(14)	75.0 (9)	30.0 (3)	21.4 (3)	54.8 (17)	46.2 (12)
Spouses not visited	33.3 (7)	25.0 (3)	70.0 (7)	78.6 (11)	45.2 (14)	53.8 (14)
TOTAL	100.0(21)	100.0(12)	100.0(10)	100.0(14)	100.0(31)	100.0(26)

Table 4.4 above shows that there was no association between visits to farmers' spouses and gender relations when the agent was female, δ(MW) was 8.6%. Female agents visited the men and women farmers' spouses equally.

Necessity of visits to spouses showed no association with gender relations, δ(MW) was less than 10.0% in all cases. All the men and women visited by the male agent and over 85% of the men and women he did not visit said the visits to their spouses were necessary. Over 90% of the men, all the women visited, and all the women who were not visited said the visits by the female agents were necessary. This is shown in table 4.5 below. The indication is that both men and women farmers accept that visits by extension agents to their spouses are necessary.

Table 4.5 Necessity of agents visits to farmers' spouses and reason by gender Relations - Farmers perspective

VISITS	MALE AGENT				FEMALE AGENT			
	FARMERS VISITED %(N)		FARMERS NOT VISITED %(N)		FARMERS VISITED %(N)		FARMERS NOT VISITED %(N)	
NECESSARY	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN
YES	100.0(19)	100.0(20)	94.7(18)	85.7(12)	90.9(10)	100.0(12)	100.0(13)	100.0(8)
NO	-	-	5.3(1)	14.3(2)	9.1(1)	-	-	-
TOTAL	100.0(19)	100.0(20)	100.0(19)	100.0(14)	100.0(11)	100.0(12)	100.0(13)	100.0(9)
REASON								
Guidance	31.6(6)	15.0(3)	17.6(3)	28.6(4)	75.0(9)	33.3(4)	10.0(1)	12.5(1)
Help	-	-	11.8(2)	7.1(1)	-	16.7(2)	100.0(1)	25.0(2)
Official	5.3(1)	-	-	-	-	-	-	25.0(2)
Benefits	-	5.0(1)	17.6(3)	7.1(1)		-	10.0(1)	37.5(3)
Teaching	57.9(11)	75.0(15)	52.9(9)	35.7(5)	16.7(2)	41.7(5)	70.0(7)	-
Affiliation	5.3(1)	-	-	14.3(2)		-	-	-
Official	-	5.0(1)-	-	7.1(1)		8.3(1)	-	-
Not necessary	-		-	-	8.3(1)		-	-
TOTAL	100.0(19)	100.0(20)	100.0(17)	100.0(14)	100.0(12)	100.0(12)	100.0(10)	100.0(8)

Table 4.6 below shows that at the level of the male agent, no association was found between the farmers' perception of the category of farmers visited and gender relations, δ(MW) was less than 10.0% in all cases. Regarding farmers who were not visited, a strong association with the perception of equal visits to men and women farmers was found. This was high for men (90.0%) and low for women (38.1%) δ(MW) was 51.9%. At the level of men only the association was high for women at 30.8% δ(MW).

Table 4.6 Category of Farmers Visited by Agents by Gender Relations-Farmers perspective

CATEGORY OF FARMERS VISITED	MALE AGENT				FEMALE AGENT			
	FARMERS VISITED %(N)		FARMERS NOT VISITED %(N)		FARMERS VISITED %(N)		FARMERS NOT VISITED %(N)	
	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN
Men only	9.3(4)	7.1(2)	-	30.8(4)	-	4.8 (1)	-	12.5(1)
Men>Women	37.2(16)	35.7(10)	10.0(1)	23.1(3)	40.0(12)	38.1(8)	25.0(1)	25.0(2)
Men<Women	-	3.6(1)	-	7.7 (1)	3.3(1)	19.0(4)	25.0(1)	12.5(1)
Men = Women	53.5(23)	53.6(15)	90(9)	38.1(15)	56.7(17)	38.1(8)	50.0(2)	50.0(4)
TOTAL	100.0(43)	100.0(28)	100.0(10)	100.0(13)	100.0(30)	100.0(21)	100.0(4)	100.0(8)

The female agent farmer interaction revealed a weak relationship at the level of equal visits to men and women farmers. It was high for men (56.7%) and low for women (38.1%) visited δ(MW) was 18.6%. Mixed association was observed at the level of the farmers who were not visited. The general perception of farmers was that, the agents visited equal number of men and women farmers. However, a significant number of them, particularly the women who were not visited felt the male agents visit more men than women farmers.

4.1.1.2 Frequency of agent-farmer interactions

Frequent interactions give participants more opportunities to know one another, which is the basis for the development of a relationship. The farmers' and agents' views on how frequently they interacted are shown below.

Farmers' perspective of the frequency of visits by agents The frequency of interaction between male and female agents and men and women farmers showed a

weak, positive association with gender relations (table 4.7 below). The values for the frequency of interaction were high in all cases of interaction with men and low interaction with women. The association was weak at the level where the male agents visited men (84.8%) and women (72.4%) farmers, with a δ(MW) of 12.4%. The association was statistically significant at the 5% level. (See Appendix 3)

Table 4.7 Frequency of Agents Visits to Farmers and their Spouses by Gender Relations- Farmers perspective

FREQUENCY OF VISITS	MALE AGENTS				FEMALE AGENTS			
	FARMERS VISITED %(N)		FARMERS NOT VISITED* %(N)		FARMERS VISITED %(N)		FARMERS NOT VISITED %(N)*	
	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN
FARMERS								
High (<= fortnightly)	84.8(39)	72.4(21)	75.0 (9)	50.0(7)	90.0 (27)	76.2(16)	73.3(11)	61.5(8)
Low (above fortnightly)	15.2 (7)	27.6 (8)	25.0(3)	50.0(7)	10.0(3)	23.8 (5)	26.7 (4)	38.5 (5)
TOTAL	100.0(46)	100.0(29)	100.0 (15)	100.0(14)	100.0(30)	100.0(21)	100.0(15)	100.0(13
FARMERS SPOUSES								
High (<= fortnightly)	73.7(14)	42.1(8)	41.7(10)	46.2(6)	42.9(6)	63.6(7)	46.7(7)	31.3 (5)
Low (above fortnightly)	26.3 (5)	57.9 (11)	58.3(14)	51.6(72)	57.1(8)	36.4(4)	53.3(8)	68.8(11)
TOTAL	100.0(19)	100.0(19)	100.0(24)	100.0(13)	100.0(14)	100.0(11)	100.0(15)	100.0(16)

Again in table 4.7 above, the frequency of interaction with farmers' spouses showed a negative association with gender relations, except at the male agent-spouses of men (73.7%) and female agent-spouses of women (63.6%) level which was positive, weak, with a δ(MW) of 10.1%. The association was statistically significant at the 5% level (See Appendix 3).

Frequency of visits - agents' perspective. The rate at which agents visited men and women farmers from the agents' perspective is shown in table 4.9 below. More

agents visited men more frequently than they visited women. The frequency of visits was positive high for male-men (57.7%) and female-men (66.7%) interaction than male-women (7.1%) and female-women (33.3%. δ(MW) was more than 20.0% at both levels of interaction. The explanation given for higher frequency of visits by most agents to men was associated with the perceived higher population of men than women farmers, receptivity of farmers, nature of farming activity and time constraint as shown in table 4.8 below.

The few who made more frequent visits to women than men did so because of the attitude exhibited by farmers, and the nature of their need.

Table 4.8 Frequency of Agents' visits to farmers by gender Relations- Agents perspective.

FREQUENCY OF VISITS	MALE AGENT %(N)		FEMALE AGENT %(N)	
Relative frequency of visits to farmers.				
• Equal frequency of visits to men and women.		35.7(5)		-
• More frequent visits to men than women.		57.7(8)		66.7(2)
• Less frequent visits to men than women.		7.1(1)		33.3(1)
TOTAL		100.0(14)		100.0(3)
REASON FOR THE STATED FREQUENCY OF VISITS.	MEN	WOMEN	MEN	WOMEN
Equal frequency of visits to men and women farmers				
• More men farmers than women farmer		7.1(1)	-	
• Works according to schedule.	21.4(3)	14.3(2)	-	-
• Most are peasant farmers who need advice	7.1(1)		-	
• Men and women work together on the farm.	7.1(1)	-		
• To improve upon their standard of living	-	7.1(1)		
• Women do cropping and women related activities.	-	7.1(1)		
				-
More frequent visits to men than women farmers				
• More men farmers than women farmer	21.4(3)	35.7(4)		-
• Receptive household heads with cash crops	35.7(5)	7.1(1)	66.7(2)	-
• Women are constrained by time.	-	14.3(2)		66.7(2)
Less visits to men than women farmers				
• Men think they know and do not need advice.	7.1(1)		33.3(1)	-
• Most have need for extension advice	-	7.1(1)	-	-
• Visit women for cropping and home management.		-	-	33.3(1)
TOTAL	100.0(14)	100.0(14)	100.0(3)	100.0(3)

From both farmers and agents perspective the male and female agents visited more men than women farmers.

4.1.1.3 Duration of interactions

In this section the period of time agents spent with farmers when they visited them and reasons are presented from both farmers and agents' perspectives. The premise is that the longer the period of contact between agents and farmers, the better their chances of developing and maintaining a relationship.

Farmers Perception of the Period of Time Agents Spend Interacting with Them. The following tables show the findings on the period male and female agents spend when visiting men and women farmers and their spouses with reasons.

Table: 4.9 The Period Agents Spend with Farmers and their Spouses by Gender Relations - Farmers perspective

TIME SPENT	MALE AGENTS FARMERS VISITED %(N)				FEMALE AGENTS FARMERS NOT VISITED %(N)			
	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN
FARMERS								
High (Beyond 4hrs)	37.0(17)	32.2(9)	41.7(5)	36.4(4)	41.4 (12)	47.6(10)	28.6(4)	58.3(5)
Low (Below 4 hrs.)	63.0(30)	67.8(19)	58.3(7)	63.6(7)	58.6(17)	52.4 (11)	71.4 (10)	41.7(7)
TOTAL	100.0(46)	100.0(28)	100.0 (12)	100.0(11)	100.0(30)	100.0(21)	100.0(15)	100.0(12)
FARMERS' SPOUSES								
High (Beyond 4hrs)	25.0 (4)	28.6(4)	43.8(7)	40.0(2)	50.0(4)	28.6(2)	23.1(3)	22.2(2)
Low (Below 4hrs).	75.0(12)	71.4(10)	56.2 (9)	60.0(3)	50.0(4)	71.4 (5)	76.9(10)	77.8(7)
TOTAL	100.0(16)	100.0 (14)	100.0(16)	100.0(5)	100.0(8)	100.0(7)	100.0(13)	100.0(9)

Generally, the period spent by male agents visiting farmers and their spouses showed no association with gender relations, δ(MW) was less than 10.0% as shown in table 4.9 above. At the level where female agents visited the spouses of farmers, a strong association, high for female-wives (50.0%) interaction and low for female-husbands interaction with a δ(MW) above 20.0% was reported. The implication from the farmers' perception is that farmers spend equal amount of time with men and women farmers.

Agents' Perception of the Duration of their Interactions with Farmers. In table 4.10 below the agents' view of how long they stay with men and women farmers are shown with reasons.

No association was found between gender relations and the period spent by male agents with men and women farmers. The period spent by the female agent with farmers however, showed a strong, positive association with gender relations, that was more time with men than women farmers (66.7% and 33.3% respectively) as shown in table 4.10 below, the δ(MW) was more than 20.0%.

The explanations given by those who spent more time with men associated with gender. That is, intra-gender interaction was more comfortable, while the reasons for inter-gender interaction was that it aroused suspicion of intimate relationship and so could be uncomfortable. Ability to understand ideas, distraction and time constraint were also given to explain the period spent interacting. The nature of the

problem and personal attitude towards the activities also determined the period of interaction. (See table 4.10 below)

Table 4.10 The Period Agents Spend with Farmers and Reason by Gender Relations - Agents Perspective

PERIOD OF INTERACTION	MALE AGENT %(N)		FEMALE AGENT %(N)	
Relative of the amount of time spent visiting farmers				
Equal amount of time with men and women.		35.7(5)		-
More time with men than women.		35.7(5)		66.7(2)
Less time with men than women.		28.6(4)		33.3(1)
TOTAL		100.0(14)		100.0(3)
REASON	MEN	WOMEN	MEN	WOMEN
Equal amount of time with men and women farmers.				
Time spent imparting technology to either is the same.	21.4(3)	7.1(1)	-	-
Teach a group of men and women	7.1(1)	-	-	-
Period is based on activity	-	21.4(3)	-	-
Conduct demonstration after teaching	-	7.1(1)	-	
No explanation	7.1 (1)	-	-	-
More time with men than women farmers.				
Because they are men I can stay longer with them.	7.1(1)		-	-
Men open up and quickly grasp ideas readily.	21.4(3)		-	-
It is comfortable easy contacting men.	7.1(1)		66.7(2)	-
Women do not open up for discussions.	-	14.3(2)		-
It takes too much time teach women due to distraction.		14.3(2)		66.7(2)
Spend limited time with women to avoid suspicion.		7.1(1)		
Less time with men than women				
Men open up and quickly grasp ideas.	14.3 (2)		-	-
Men think they know more are therefore do not co-operate.	7.1(1)			-
Time is spent on field problems only.	7.1(1)		33.3(1)	-
Discuss field problems and then personal problems.	-	- 7.1(1)	-	-33.3(1)
Explaining technology to female is the same as to male		7.1(1)		-
Women talk too much and ask a lot of questions.		7.1(1)		-
Conducts demonstration after teaching.	-	7.1(1)		-
			-	-
TOTAL	100.0(14)	100.0(14)	100.0(3)	100.0(3)

Agents and farmers feel equal time is spent with men and women farmers are equal whereas female agents feel they spend more time with men than women farmers

4.1.2 Intensity of the sentiments of the interaction

The intensity of sentiment of the interaction between agents and farmers was measured in a number of contexts, considering factors that could influence its magnitude with explanations. These factors were the disposition of liking among the individuals; visits by farmers to agents; discussion of farmers personal problems with the agents and number of persons interacting during visits and activities. The explanation given for the disposition expressed and the effect of gender bias, which could influence the feelings expressed, were assessed, the findings are presented below.

4.1.2.1 Disposition of individuals involved in the interaction

The disposition of liking among individuals involved in an interaction tends to draw them closer into a positive relationship with one another. The stronger this disposition the closer the relationship that results in the interaction. Negative sentiments or the disposition of dislike would keep people away from one another. Indifference is the state of disposition considered as neutral intensity of sentiments.

Farmers' perspective of the sentiments of the interaction. The following tables show the farmers' perception of their disposition towards the extension agents visiting them and their spouses based on gender relations.

Table: 4.11 Farmers' Disposition about Agents' Visits to Them and the Influence of Gender on the Feelings by Gender Relations- Farmers' perspective

	MALE AGENT				FEMALE AGENT			
	FARMERS VISITED %(N)		FARMERS NOT VISITED %(N)		FARMERS VISITED %(N)		FARMERS NOT VISITED %(N)	
DISPOSITION	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN
Farmers								
Like	97.9 (46)	89.7 (26)	94.7 (14)	92.9 (13)	100.0 (30)	95.2 (20)	100.0 (28)	82.6 (19)
Indifferent	2.1 (1)	10.3 (3)	5.3 (1)	7.1 (1)	-	4.8(1)	-	7.4 (1)
Dislike	-	-	-	-	-		-	10.0 (3)
TOTAL	100.0(47)	100.0 (29)	100.0 (15)	100.0(14)	100.0 (30)	100.0 (21)	100.0 (28)	100.0 (23)
INFLUENCE OF GENDER								
Yes	10.6 (5)	6.9 (2)	5.3 (1)	14.3 (2)	6.7 (3)	4.8 (1)	5.0 (1)	20.0 (5)
No	89.4 (42)	93.1 (27)	94.7 (14)	85.7 (12)	93.3 (25)	95.2 (21)	95.0 (19)	80.0 (20)
TOTAL	100.0 (47)	100.0 (29)	100.0 (15)	100.0(14)	100.0(28)	100.0 (22)	100.0(20)	100.0 25)

In table 4.11 above no association was found between gender relations and feelings expressed by farmers towards the male agents' visits to them. Also, there was no association between the influence of gender relations on their feelings towards the visits to them and to their spouses. A weak positive association between farmers disposition and gender relations was however, observed at the level of farmers who were not visited by the female agent, it was high for men (100.0%) and low for women (82.6%) with 17.4% δ(MW). The influence of gender relations on the feelings expressed by this group was negative and weakly associated. The values were high for men (95.0%) and low for women (80.0%) with a δ(MW) of (15%).

Most of the men and women farmers liked the visits made by both male and female agents to them. A few of the women who were not visited however said they would not like visits by the female agent.

In table 4.12 below an association between gender relations and disposition about visits to farmers' spouses was found at all levels except the level of farmers who were not visited by the male agent. The association was strong at the female agent level high for spouses of men farmers (l00.0%) and low for spouses of women (75%) with a δ(MW) above 20.0%. The association was weak with farmers visited by the male agents and those who were not visited by the female agent. The δ(MW) was between 10.0-20.0%. The influence of gender on the disposition of farmers, with respect to their spouses, who were not visited by the male agent, also showed a weak, positive association with gender relations. It was high for women's spouses (100.0%) and low for women's spouses (85.7%) with a δ(MW) of 14.3%.

Table: 4.12 Farmers' Disposition about Agents Visits to their Spouses and the Influence of Gender on the Feelings by Gender Relations. Farmers' perspective

DISPOSITION	MALE AGENT				FEMALE AGENT			
	FARMERS VISITED %(N)		FARMERS NOT VISITED %(N)		FARMERS VISITED %(N)		FARMERS NOT VISITED %(N)	
	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN
Like	90.0 (18)	100.0(19)	92.9 (13)	100.0(29)	100.0(14)	75.0 (9)	96.2(25)	81.9 (17)
Indifferent	10.0 (2)	-	7.1 (1)	-	-	25.0(3)	3.8(1)-	4.6 (1)
Dislike	-	-	-	-	-		-	14.3 (3)
TOTAL	100.0(20)	100.0(19)	100.0 (15)	100.0(29)	100.0(30)	100.0(21)	100.0(28)	100.0(23)
INFLUENCE OF GENDER								
Yes	-	5.3 (1)	14.3 (2)	-	7.1 (1)	9.1 (1)	20.0 (5)	5.0 (1)
No	100.0(20)	94.7 (18)	85.7 (12)	100.0(24)	92.9(13)	90.9(10)	80.0(20)	95.0(19)
TOTAL	100.0(20)	100.0 (19)	100.0 (14)	100.0(24)	100.0(14)	100.0 (11)	100.0(25)	100.0(20)

A similar trend was observed for the interaction between female agents and the spouses who were not visited. The general observation was that the farmers liked

the visits. Also the disposition of farmers who were visited, about the visits to them and their spouses was not influenced by gender relations as shown in table 4.13 below. The disposition of both men and women farmers was not influence by gender relations but by the purposes and consequences of the agents visits.

Table: 4.13 Reasons for Stated Disposition about Agents Visits to Farmers by Gender Relations - Farmers perspective

REASON	MALE AGENT				FEMALE AGENT			
	FARMERS VISITED %(N)		FARMERS NOT VISITED %(N)		FARMERS VISITED %(N)		FARMERS NOT VISITED %(N)	
	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN
Guidance	10.9(5)	7.1(2)	-	-	16.7 (5)	-	25.0 (7)	4.8 (1)
Help	2.2 (1)	-	7.7 (1)	14.3 (2)	-	9.5(2)	14.3 (4)	4.8 (1)
Affiliation	2.2(1)	-	-	-	-	4.8 1)	-	4.8 (1)
Govt. official	21.7(10)	17.9(5)	15.4(2)	21.4 (3)	26.7 (8)	28.6(6)	28.6 (8)	28.5(6)
Benefits	2.2 (1)	-	7.7(1)	-	3.3 (1)	4.8 (1)	-	4.8 (1)
Teacher	52.2(24)	71.4 (20)	69.2(9)	64.3(9)	50.0 (15)	47.6(10)	32.1 (9)	47.5 (10)
Gender	8.7(4)	3.6 (1)	-	-	3.3(1)	4.8(1)	-	4.8 (1)
TOTAL	100.0(46)	100.0(28)	100.0(13)	100.0(14)	100.0(30)	100.0(21)	100.0(28)	100.0 (21)

Table 4.13 above and 4.14 below shows that most of the farmers gave responses that indicate that they are indifferent to the gender of the agent. Their main concern was the assistance the agent could provide by way of teaching and guidance and the role a government official was supposed to play). Very few of them (below 10% of the categories involved) were gender sensitive.

The observations in the two tables above (Tables 4.13 and 4.14) show that few of the men visited by a male agent preferred working with the male agent because they felt men should work with men and that male agents taught better than female agents. Some of the women did not like the male agent because they felt women

should work with female agents and that female agent taught women better. Among the men who were visited by female agents were those who said they preferred male agent because they feel men should work with men.

Table: 4.14 Explanation for Disposition about Agents' Visits to Farmers' Spouse by Gender Relations - Farmers Perspective

REASON FOR DISPOSITION	MALE AGENT				FEMALE AGENT			
	FARMERS VISITED %(N)		FARMERS NOT VISITED %(N)		FARMERS VISITED %(N)		FARMERS NOT VISITED %(N)	
	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN
Guidance	15.8(3)	10.0 (2)	6.3 (1)	7.7 (1)	14.3 (2)	-	28.6 (8)	-
Help	-	-	-	7.7 (1)	7.1 (1)		10.7 (3)	4.2 (1)
Affiliation	5.3 (1)	5.0 (1)		7.7 (1)	-	-		4.2 (1)
Government official	21.1(4)	25.0 (5)	6.3 (1)	15.4 (2)	14.3 (2)	25.0 (3)	25.0 (7)	8.3 (2)
Benefits		10.0 (2)	-	-	-		-	-
Teacher	52.6(10)	50.0 (10)	87.5(14)	61.5(8)	57.1(8)	58.3 (7)	35.7(10)	75.0(18)
Gender	5.3 (1)	-	-	-	7.1 (1)	16.7 (8)	-	8.3 (2)
TOTAL	100.0(19)	100.0 (20)	100.0(16)	100.0(13)	100.0(14)	100.0 (12)	100.0(28)	100.0 (24)

The Disposition Associated with Interacting with Men and Women Farmers from the Perspective of Extension Agents. The expectation in this instance was that agents would be drawn towards farmers who liked them and have interest in their visits and keep away from farmers who did not like them and their presence.

The agents view on how farmers feel about them when they visit them and their spouses and gender showed no association at the male agent farmer level δ(MW) was less than 9.9%. Most men and women farmers liked the male agent as shown in Table 4.15 above. A strong positive association was found between the disposition

of farmers about the female agent and her visits and gender relations. The observed values were high for men (100.0%) and low for women (66.7%) δ(MW) was above 20.0%.

Table: 4.15 Farmers' Dispositions about Agents Interaction with them and their Spouses by Gender Relations - Agent's Perspective

DISPOSITIONS	MALE AGENT %(N)		FEMALE AGENT %(N)	
	MEN	WOMEN	MEN	WOMEN
Likes	92.9(13)	85.7(12)	100.0(3)	66.7(2)
Indifferent	7.1%).1)	14.3 (2)	-	33.3(1)
TOTAL	100.0(14)	100.0(14)	100.0(3)	100.0(3)
Farmers spouses' disposition about visits to their spouses				
Like	78.6(11)	92.9(13)	66.7(1)	33.3(2)
Indifferent	7.1(1)	7.1(1)	33.3(2)	66.7(1)
Displeased	14.3(2)	-	-	-
TOTAL	100.0(14)	100.0(14)	100.0(3)	100.0(3)

The association between farmers disposition about their spouses' interaction with male agents and gender relations showed a weak, positive, relationship that was high for women's spouses (92.9%) and low for men's spouses (78.6%) δ(MW) was above 20.0%. A strong association was observed between farmers' disposition about their spouses' interaction with the female agent and gender relations. The association was high for the spouse's of men (66.7%) and low for the spouses of women with δ(MW) above 20.0%. Although both men and women farmers like the male agents visits to their farmer Women like

Table 4.16 below shows that, a strong association was found between sentience disposition and gender relations. It was positive and high at the male level of interaction with men (50.0%) and low at the male level of interaction with women (7.1%), δ(MW) was above 20.0%. At the level of the female agent the association was negative and high with men (33.3%) and low with women (0.0%) of 20.0% δ(MW) above 20.0%.

Table: 4.16 **The Disposition of Agents among Farmers and Reason by Gender Relations- Agents perspective**

FEEL COMFORTABLE WITH	MALE AGENT %(N)	FEMALE AGENT %(N)
Men	50.0 (7)	33.3(1)
Women	7.1 (1)	-
Either	42.9 (6)	66.7(2)
TOTAL	100.0(14)	100.0(3)
Explanation		
Men		
No problem arises when men are visited.	21.4(3)	-
They easily open up for discussions	28.6(4)	33.3(1)
Women		
They readily accept technology	7.1(1)	-
Either		
Serious ones are visited	-	33.3(1)
Fair attention to men and women.	7.1 (1)	33.3(1)
Because I must visit the two.	21.4 (3)	-
Listen to issues they discuss	14.3 (2)	-
TOTAL	100.0(14)	100.0(3)

The reasons given for the male agents' comfortable disposition with men was that they had problems interacting with women because of suspicion of intimate relationship with them. The general reason for comfortable disposition with both men and women was receptivity to technology.

4.1.2.2 Farmers perspective of their visits to agents

The following tables show how farmers reciprocate in their interaction with extension agents by visiting the agents.

Table 4.17 below shows that there was a strong association between gender relations and paying visits to the male agent. This association was high and neutral with respect to the men (50.0%) and low and negative with respect to the women (20.7%) who return the male agents' visits. The δ(MW) was above 20.0% and a significant chi-squared value (See Appendix 3). The visits to agents by farmers who were not visited by the male agent showed a weak negative association with gender relations, the men (27.3%) had a higher value than the women (7.7%), δ(MW) of 19.6%. Men farmers visited the male agent more than women farmers did.

Female agents had less visited by both men and women farmers as shown in table 4.17 below. No association was observed at the female agents' level of farmers' visits to agents and gender. The direction of the farmers paying visits to the agents was negative. Fewer farmers visited the female agent their reason being that they did not know her residence.

Guidance was the main reason given for paying visits to the agents. Minimum interaction and not knowing the residences of the agents were the reasons given for not visiting them.

Table 4:17 Farmers Visits to Agents by Gender Relations- Farmers perspective

VISITS EXTENSION AGENTS	MALE AGENT				FEMALE AGENT			
	FARMERS VISITED %(N)		FARMERS NOT VISITED %(N)		FARMERS VISITED %(N)		FARMERS NOT VISITED %(N)	
	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN
Yes	50.0(23)	20.7(6)	27.3 (3)	7.7(1)	17.2(5)	19.0(4)	16.7(2)	16.7(2)
No	50.0(23)	79.3(23)	72.7(11)	92.3(12)	82.8(24)	81.0(17)	83.3(10)	83.3(10)
Total	100.0(46)	100.0(29)	100.0(14)	100.0(13)	100.0(29)	100.0(21)	100.0(12)	100.0(12)
REASON FOR YES								
Guidance	30.4(14)	6.9(2)	18.2(2)	-	10.3(3)	10.0(2)	8.3(1)	9.1(1)
Help	10.4(5)	3.4(1)	-	-	3.4(1)	-		-
Affiliation	6.6(3)	-	9.1(1)	-	-	-	-	-
Government official	-	-	-	7.7(1)		-	-	-
Teacher	-	-	-	-	3.4(1)	5.0(1)	-	-
Benefits	2.2(1)	6.9(2)	-			-		9.1(1)
Intra-gender acceptable	--	-	-	-	-	-	8.3(1)	-
REASON FOR NO								
Inter-gender unacceptable	-	3.4	-	-	3.4(1)	5.0(1)		9.1(1)
Minimum interaction	8.7(4)	20.7(6)	9.1(1)	38.5(5)	13.8(4)	35.0(7)	58.2(7)	45.5(5)
Do not know residence	26.1(12)	31.0(9)	18.1(2)	23.5(3)	51.7(15)	30.0(6)	8.3(1)	18.2(2)
Time constraint	2.2(1)	3.4(1)	9.1(1)	15.4(2)	3.4(1)	5.0(1)	8.3(1)	-
Not necessary	2.2(1)	6.9(2)	18.2(2)	7.7(1)	6.9(2)	10.0(2)	8.3(1)	
Agent visit Regularly	10.5(5)	13.8(4)	18.2(2)	7.7(1)		-	-	9.1(1)
TOTAL	100.0(46)	100.0(29)	100.0(11)	100.0(13)	100.0(29)	100.0(20)	100.0(11)	100.0(11)

In table 4.18 below, the farmers showed a positive desire to visit the agents should the opportunity arise. No association was observed at the level of the farmers who would return the male agents' visits with gender. At the level of the farmers who were not visited, a weak association high for men (100.0%) and low for women was observed (82.1%) with gender for desire to visit the male agent; δ(MW) was 17.9%.

Table: 4.18 The Reaction of Farmers who Did Not Visit Agents to Another Opportunity to Visit Them by Gender Relations - Farmers perspective

VISITS	MALE AGENT				FEMALE AGENT			
EXTENSION	FARMERS VISITED %(N)		FARMERS NOT VISITED %(N)		FARMERS VISITED %(N)		FARMERS NOT VISITED %(N)	
AGENTS	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN
Yes	87.0(20)	78.3(18)	100.0(7)	81.8(9)	85.0(17)	58.8(10)	70.0(7)	62.5(5)
No	13.0(3)	21.7(5)	-	18.2(2)	15.0 (3)	41.2 (7)	30.0(3)	37.5(3)
Total	100.0(23)	100.0(23)	100.0(7)	100.0(11)	100.0(20)	100.0(17)	100.0(10)	100.0(8)
REASON FOR YES								
Guidance	40.9(9)	39.1(9)	71.4(5)	25.0(3)	54.5(12)	37.5(6)	66.7(8))	14.3(1)
Help	13.6(3)	8.7(2)	-	8.3 (1)		12.5(2)	8.3(1)	
Affiliation	22.7(5)	21.7(5)	-	8.3 (1)	13.6(3)	6.3(1)		14.3(1)
Government official	4.5(1)	4.3(1)	-	16.7(2)	4.5(1)	-		14.3(1)
Teacher	4.5 (1)	4.3(1)	28.6(2)	25.0(3)	9.2(2)	-		-
Intra-gender acceptable	-	-	-	-	-	6.3(1)		
REASONS FOR NO								
Inter-gender unacceptable	–	8.7(2)	-	8.3(1)		-		14.3(1)
Minimum interaction	9.1(1)	4.3(1)			4.5(1)	18.8(3)	16.6(2)	14.3(1)
Does not know residence	4.5(1)	4.3(1)			13.6(3)	6.3(1)	8.3(1)	-
Time constraint		4.3(1)		-	-			
Not necessary	4.5(1)	8.7(2)		-	-	12.5(2)		28.6(2)
Not considered		-		8.3(1)		-		
TOTAL	100.0(23)	100.0(23)	100.0(7)	100.0(12)	100.0(22)	100.0(16)	100.0(12)	100.0(7)

The table 4.18 below shows that farmers who were visited by the female agents show a strong association on willingness to pay her visits with gender. This was also high for men (85.0%) and low for women (58.8%), with a δ(MW) below 20.0%, who would return her visits. No association was observed at the level of farmers who were not visited and willingness to visit the agent by gender relations, δ(MW)

was less than 10.0%. The main reason for the farmers' willingness to visit agents were for guidance

4.1.2.3 Discussing personal issues

The assumption was that individuals who trust one another discuss their personal problems among themselves if they were close. A farmer, who discusses his personal problems with an agent, on official duties, must be in a close relationship with the agent.

Table: 4.19 Discussion of Personal Problems with Agents and Reasons by Gender Relations Farmers perspective

DISCUSS PERSONAL PROBLEMS	FARMERS CONTACT WITH BOTH %(N)		FARMERS CONTACTED MALE ONLY %(N)		FARMERS CONTACTED FEMALE ONLY %(N)		FARMERS WITH NO CONTACT %(N)	
	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN
Yes	77.3(17)	43.7 (7)	72.0(18)	36.4(4)	55.5(5)	33.3(1)	50.0(3)	41.7(5)
No	22.7(5)	56.3(9)	28.0(7)	63.6(7)	44.4(4)	66.7 (2)	50.0(3)	58.3(7)
TOTAL	100.0(22)	100.0(16))	100.0(25)	100.0(11)	100.0(9)	100.0(3)	100.0(6)	100.0(12)
REASON FOR DISCUSSION								
Guidance	38.1 (8)	11.6(2)	26.9(7)	27.3(3)	11.1(1)	33.3(1)	6.7(1)	-
Help	23.8(5)	5.9(1)	23.0(6)	9.1 (1)	11.1(1)		33.3(2)	9.(1)
Affiliation	9.5 (2)	17.6(3)	19.2 (5)	-	33.3(3)	-	-	18.2(2)
Government officials	-	5.9 (1)					-	18.2(2)
Teaching	4.8(1)	-			-			
REASON AGAINST DISCUSSING								
Time constraint	-		3.8 (1)	27.3(3)	11.1(1)			
Gender		5.9(1)	3.8(1)	-			-	
Not aware			3.8(1)	9.1(1)			-	
Meet in groups	-				-	-		9.1(1)
Not free	4.8(1)	-	-	-	-			
Not necessary	19.0(4)	53.1(9)	19.2.5(5)	27.3(3)	33.3(3)	66.7(2)	50.0(3)	45.2(5)
TOTAL	100.0(21)	100.0(17)	100.0(26)	100.0(11)	100.0(9)	100.0 (3)	100.0(6)	100.0(11)

Farmers' Perception of Discussing their Personal Problems with Agents. Farmers' ability to discuss their personal problems with agents was found to be strongly associated to gender relations. It was strong with men (72.0%) as against (36.4%) women by the male agents and weak with the female agent and men (55.5%) and women (33.3%) and a δ(MW) in either case was above 20.0% as shown in table 4.19 above. The findings imply that more men discuss their personal problems with extension agents than women do. The men however prefer discussing their personal problems with male agents for help, guidance and affiliation. The farmers who did not discuss their problems with the agents said they did not have the opportunity to do so, were constrained by the gender of the agent or did not see the need for it.

Table: 4.20 Discussion of Personal Problems with Agent by Farmers' Spouse and Reason by Gender Relations

SPOUSES DISCUSS PERSONAL PROBLEMS	SPOUSES CONTACT WITH BOTH %(N)		SPOUSES CONTACTED MALE ONLY %(N)		SPOUSE CONTACTED FEMALE ONLY %(N)		SPOUSES WITH NO CONTACT %(N)	
	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN
Yes	52.9(9)	66.7(6)	60.0(12)	66.7(6)	28.6(2)	33.3 (1)	40.0(2)	33.3(4)
No	47.1(8)	33.3(3)	40.0(8)	33.3(3)	71.4(5)	66.7(2)	60.0(3)	66.7(8)
TOTAL	100.0(17)	100.0(9)	100.0(20)	100.0(9)	100.0(7)	100.0(3)	100.0(5)	100.0(12)
REASON FOR DISCUSSING								
Guidance	38.9(7)	11.1(1)	5.0(1)	42.9 (3)		33.3(1)		
Help	11.1(2)	22.2(2)	30.0(6)	42.1(3)	14.3(1)		20.0(1)	9.1(1)
Always available	5.6(1)				14.3(1)			
Affiliation		11.1 (1)	15(3)			-		27.3 (3)
Government official		11.1 (1)	5.0 (1)	- -		-	20.0(1)	
Teaching	-		5.0(1)	-			-	
Gender positive		11.1 (1)		-		-	20.0(1)	

Table: 4.20 (continued) Discussion of Personal Problems with Agent by Farmers' Spouse and Reason by Gender Relations

SPOUSES DISCUSS PERSONAL PROBLEMS	SPOUSES CONTACT WITH BOTH %(N)		SPOUSES CONTACTED MALE ONLY %(N)		SPOUSE CONTACTED FEMALE ONLY %(N)		SPOUSES WITH NO CONTACT %(N)	
	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN
REASON FOR NOT DISCUSSING								
Gender negative		11.1 (1)	-	-	-	-		36.4(4)
Minimal interaction	11.1(2)	-	20.0(4)	-	28.6(2)		40.0(2)	18.2 (2)
Time constraint		-	10.0(2)	-	14.3(1)	33.3(1)	-	9.1(1)
Not necessary	33.3(6)	22.2(2)	10.0(2)	14.3 (1)	28.6(2)	33.3(1)	16.7(1)	9.1 (1)
TOTAL	100.0(18)	100.0(9)	100.0(20)	100.0(7)	100.0(7)	100.0 3)	100.0(5)	100.0 (11)

Table 4.20 above shows the association between the ability of spouses of farmers to discuss their personal problems with the agents and gender relations. The findings showed no association between the variables δ(MW) was less than 10.0%. The farmers' spouses visited by both male and female agents showed high propensity at discussing personal problems with the agents (52.9% men's spouses and 66.7% of the women's spouses). Most of the spouses of farmers (71.4% of the men's spouses and 66.7% of the women's spouses) contacted by the female agents only, did not discuss personal problems with them. Most of the men (66.7%) and women (27.3%) farmers who were not contacted by either of them were not willing to discuss their personal problems with them.

Agents' Perception of Farmers ability to' Discuss their Personal Problems with them. Table 4.21 below shows the agents' perspective of the distribution of farmers who discuss their personal issues with them. A strong association was found at the male agents' level which was positive and high for men (86.7%) and negative and low for women (28.7%), with δ(MW) above 20.0%. No association between

discussion of personal problems and gender relations was found at the female agent level. This was because both the men and women discussed their personal problems with them.

Table: 4.21 Discussion of Farmers Personal Problems with Agents by Gender relations - Agents Perspective.

DISCUSS PROBLEMS	MALE AGENT		FEMALE AGENT	
	FARMERS %(N)		FARMERS %(N)	
	MEN	WOMEN	MEN	WOMEN
▪ Yes	86.7(12)	28.7 (4)	100(3)	100(3)
▪ No	14.3 (2)	71.3(10)	-	-
TOTAL	100.0(14)	100.0(14)	100.0(3)	100.0(3)
REASON FOR FARMERS DISCUSSING PERSONAL PROBLEMS WITH AGENT.				
▪ They feel comfortable with me.	50.0(7)	-	33.3(1)	-
▪ Feel I can help them financially or with advice.	35.7(5)	-	66.7(2)	66.7(2)
▪ They feel since I am a woman like them I can be helpful.	-	21.4(3)	-	33.3(1)
▪ I ask about their personal problems	-	7.1(1)	-	-
REASON FOR FARMERS NOT DISCUSSING PERSONAL PROBLEMS WITH AGENT				
▪ May be culturally unacceptable.	-	21.4(3)	-	-
▪ Does not want me to know her personal problems	-	14.3(2)	-	-
▪ Reluctant and shy to discuss personal problems with a man.	-	35.7(5)		-
▪ Not necessary.	14.3(2)	-		
TOTAL	100.0(14)	100.0(14)	100.0(3)	100.0(3)

The reasons why farmers discussed their problems with the agents, in the view of the agents were that the farmers felt comfortable with them, assistance and advice. Those who did not discuss personal problems with their agents did not do so because, in the view of the male agents, it might not be culturally acceptable, secrecy, shyness, they did not see the need.

4.1.2.4 Group size and interaction.

When the number of people involved in an interaction is small, there is more contact between members increasing sentiments for one another and the development of a

relationship. In a large group there is loose contact and bond formation for development of close relationship.

The interaction between agents and farmers are in many ways. These ways include meetings, tours, visits, and activities involving skill transfer among others. In this study group size in visits and activities was assessed since that is the most frequently used system the findings are presented below

Farmers' Perspective of the Size of Group that Receive Agents. Table 4.22 below shows the farmers perception on the discussion of personal problems with the agents.

Table 4.22 below shows that generally, there was no association between the size of group receiving visiting agents and gender relations for farmers visited by male and female agents and those who were not visited by the female agent. The δ(MW) was less than 10.0% at all levels. At the level of the farmers the male agent did not visit, the desired association was negative and strong at the large group level. It was high for men (69.2%) and low for women (46.2%), with a δ(MW) above 20.0%. At the spousal level of interaction, the association was strong and high for spouses of women (66.7%) and low with the spouses of men (42.9%), with a δ(MW) below 20.0%.

Table: 4.22 Number of Farmers and their Spouses Receiving Visiting Agent By Gender Relations-Farmers perspective

NUMBER RECEIVING AGENT	MALE AGENT				FEMALE AGENT			
	FARMERS VISITED %(N)		FARMERS NOT VISITED %(N)		FARMERS VISITED %(N)		FARMERS NOT VISITED %(N)	
	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN
FARMERS								
• Individual	10.5 (4)	8.3(2)	23.1(3)	15.4(2)	-	11.1(2)	7.7(2)	10.5(2)
• Small group	31.6 (12)	25.0(6)	7.7(1)	38.5(5)	36.0(9)	33.3(6)	30.8(8)	36.8(7)
• Large group	57.9(22))	66.7(16)	69.2(9)	46.2(6)	64.0(16)	55.6(10)	61.6(16)	52.6(10)
TOTAL	100.0(38)	100.0 (24)	100.0(13)	100.0(13)	100.0(25)	100.0(18)	100.0(26)	100.0(19)
FARMERS SPOUSES								
• Individual	-	7.7(1)	42.9(6)	33.3(2)	12.5(1)	28.6(2)	16.7(3)	9.1(1)
• Small group	42.9(6)	30.8(4)	14.3(2)	-	12.5(1)	14.3(1)	44.4(8)	36.4(4)
• Large group	57.1(8)	61.5(8)	42.9(6)	66.7(4)	75.0(6)	57.1(4)	38.9(7)	54.5(6)
TOTAL	100.0(14)	100.0(13)	100.0 (14)	100.0 (6)	100.0(16)	100.0 (11)	100.0 (32)	100.0 (23)

The female agent-visited spouses of farmers showed a weak association at the individual and large levels as shown in table 4.22 above. At the individual level, the association was high with spouses of women (28.6%) and with spouses of men (12.5%); the δ(MW) was 16.1%. The desired association by spouses of farmers who were not visited was negative and weak and low for men (38.9%) and high for women (54.5%) the δ(MW) was 15.6%.

The above analysis implies that, the agents operated at the large group level with farmers and their spouses.

Group Size for Extension Activities and Gender. Activities among a small group of people would give the agent the opportunity of direct exchanges with most of them than with a large group.

Table: 4.23 Number of Farmers and their Spouses Interacting during Extension Activities with Extension Agents by Gender Relations -Farmers perspective

NUMBER	MALE AGENT				FEMALE AGENT			
	FARMERS VISITED %(N)		FARMERS NOT VISITED %(N)		FARMERS VISITED %(N)		FARMERS NOT VISITED %(N)	
	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN
FARMERS								
• Individual	3.0(1)	5.6(1)	-	57.1(4)	-	33.3 (4)	4.3 (1)	14.3 (2)
• Small group	30.3(10)	33.3 (6)	-	14.3 (1)	17.6(3)	16.7 (2)	30.4 (7)	28.6 (4)
• Large group	66.7(22)	61.1 (11)	100.0(7)	28.6(2)	84.4(14)	50.0 (6)	65.2(15)	57.1(8)
TOTAL	100.0(33)	100.0(18)	100.0(7)	100.0(7)	100.0(17)	100.0(21)	100.0(23)	100.0 (14)
FARMERS SPOUSES								
• Individual	-	5.3 (1)	-	10.0(1)		-	4.3 (1)	15.0(3)
• Small group	60.0(3)	15.8(3)	25.0 (3)	20.0(2)	25.0(2)	10.0 (1)	30.4(7)	75.0(15)
• Large group	40.0(2)	78.9(15)	75.0(9)	70.0 (7)	75.0 (6)	90.0(9)	65.2(15)	10.0 (2)
Total	100.0 (5)	100.0(19)	100.0(12)	100.0(10)	100.0(8)	100.0(10)	100.0(23)	100.0(20)

Table 4.23 above shows that no association was observed between group size and gender relations with respect to undertaking activities, δ(MW) was less than 10.0%, at the male agent level with the farmers he visited. At the level of the farmers' spouses, a strong association was observed with gender relations, it was high in favour of spouses of men (60.0%), with a δ(MW) above 20.0%. At the small level, and favouring spouses of women visited (78.9%) the at the large group level with δ(MW) above 20.0%.

The association between group size for activity and gender relations at the female agent level was mostly at the large group level high in favour of men (82.4%) and low for women (50%); the δ(MW) was above 20.0%. A similar trend was observed for spouses and farmers who were not visited.

Table 4.24 Reason for Number of Farmers and their Spouses involved in Activities by Gender Relations.

NUMBER RECEIVING AGENT	MALE AGENT				FEMALE AGENT			
	FARMERS VISITED %(N)		FARMERS NOT VISITED %(N)		FARMERS VISITED %(N)		FARMERS NOT VISITED %(N)	
	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN
FARMERS								
Number available	34.0 (16)	17.8 (5)	46.7 (6)	14.3 (2)	13.3 (4)	30.0 (6)	30.8 (4)	27.3 (6)
All must know new method	66.0 (31)	78.6 (22)	53.3 (9)	85.7 (12)	86.7 (26)	65.0 (13)	53.8 (7)	68.2 (15)
Physically handicapped	-	3.6 (1)	-	-	-	5.0 (1)	-	-
Government Official	-	-	-		-	-	15.4 (2)	4.5 (1)
Total	100.0(47)	100.0 (28)	100.0 (15)	100.0 (14)	100.0 (29)	100.0 (20)	100.0 (13)	100.0 (22)
FARMERS SPOUSES								
Number available	26.3 (4)	41.7 (5)	18.7 (3)	60.0 (3)	7.7 (1)	16.7 (1)	21.1 (4)	18.2 (2)
All must know new method	73.7 (14)	58.3 (7)	81.3 (13)	40.0 (2)	92.3 (12)	83.3 (5)	73.6 (14)	81.3 (9)
Government Official	-	-		-	-	-	5.3 (1)	-
Total	100.0 (18)	100.0 (12)	100.0 (16)	100.0 (5)	100.0 (13)	100.0 (6)	100.0 (19)	100.0 (11)

Reasons given for the number of people involved in an interaction as shown in table 4.24 above during activities were that they facilitated access to all who desire to have the service and those who can afford the time.

Agent's Perspective of Group Size and Composition. Group size and composition showed a strong association with gender. Male agents interact with women individually and in the company others and husbands. The female agents, interaction was strong with men mostly in the company of their wives, and with women mostly on individual basis as shown in table 4.25 below.

Table: 4.25 Number and Composition of Farmers Interacting with Agents by Gender Relations - Agents' perspective.

GROUP SIZE AND COMPOSITION	MALE AGENT		FEMALE AGENT	
	FARMERS %(N)		FARMERS %(N)	
	MEN	WOMEN	MEN	WOMEN
• Individually	42.9(6)	28.7(4)	-	100.0(3)
• With spouse	-	28.7(4)	66.7(2)	-
• With other household members.	21.4(3)	28.7(4)	33.3(1)	-
• With other contact farmers.	35.7(5)	14.3(2)	-	-
TOTAL	100.0(14)	100.0(14)	100.0(3)	100.0(3)
REASON FOR THE NUMBER				
INDIVIDUAL CONTACT				
• Depends on number met.	-	-	-	-
• Not ready to join groups.	21.4(2)	14.3(2))	33.3(1)	-
• Adopts easily and teaches others.	7.1(1)		33.3(1)	-
• Have less time discussions are held anywhere.	7.1(1)	-	-	33.3(1)
• No fear or suspicion is associated.	-	-	-	33.3(1)
• That is the time they can afford.	7.1(1)	7.1(1)		-
• Some issues are confidential and require privacy	-	7.1(1)		33.3(1)
	-	-		
	-			
WITH SPOUSE				
• Avoid fear and suspicion	–	-28.7(4)	33.3(1)	-
WITH OTHER HOUSEHOLD MEMBERS				
• They are already in groups.	14.3(2)	7.1(1)		-
• Adopts easily and teaches others	7.1(1)	-		
• That is the time they can afford.	-	14.3(2)		-
• To avoid creating suspicion.		7.1(1)		
WITH OTHER CONTACT FARMERS				
• Depends on number met.	14.3(2)	-		-
• They are already in groups.	14.3(2)	14.3(2)		-
• Adopts easily and teaches others.	7.1(1)	-		-
TOTAL	100.0(14)	100.0(14)	100.0(3)	100.0(3)

There was a weak association between size of group and gender relations, at the level of male agents interacting with men. It was mostly on individual basis 42.9% and with women 28.7% among contact farmers and with their spouses the δ(MW) was 14.2%. The female agents' perspective showed a strong association between group size and gender relations, interacting with women mostly on individual basis

100.0% and men more often in the company of their wives (66.7%), the δ(MW) was above 20.0%

The reasons given for male agents' interaction on individual basis with farmers were that it was for the convenience of the farmers, for teaching, and avoidance of suspicion of intimate intra-gender agent farmer relationship. The interaction with couples was to avoid fear of being suspected and suspicion of having intimate relationship with farmers' spouses. The reasons for the interactions with other contact farmers are because they were already in groups and that was the number available. Group discussions held with the farmers revealed that some men were not prepared to allow the male agent to interact with their young wives in their absence. Some go as far as accompanying the agents to inspect their wives farms instead of the wives themselves. The young wives too avoid going to the farms alone with the male agent.

4.1.3. Activities Associated with the Interaction

The context of the activities, that is the nature, purposes and consequences of the activities are presented below. The nature of the activity has to do with the relevance of the activity to men and women farmers, while the outcome of the activity is an indication of the purpose and consequence of the activities. The assumption is that people would be interested in activities that are relevant and beneficial to them.

Farmers Perspective of the Context of Interaction. The gender bias of the activities and their relevance are shown in the following tables.

Table 4.26 Gender bias of Activity Undertaken with Agents by Gender Return - Farmers perspective.

GENDER BIAS OF ACTIVITY	MALE AGENT				FEMALE AGENT			
	FARMERS VISITED %(N)		FARMERS NOT VISITED* %(N)		FARMERS VISITED %(N)		FARMERS NOT VISITED* %(N)	
	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN
FARMERS								
Neutral	80.9 (38)	85.2 (23)	80.0.0(12)	85.7(12)	83.3(25)	61.9(13)	75.0 (24)	66.7 (14)
Women biased	6.4 (3)	7.4 (2)	13.3 (2)	7.1 (1)	3.3 (1)	33.3 (7)	12.5 (4)	23.3 (5)
Men biased	12.7 (6)	7.4 (2)	6.7 (1)	7.1 (1)	13.3 (4)	4.8 (1)	12.5 (4)	9.5 (2)
TOTAL	100.0(47)	100.0(27)	100.0(15)	100.0(14)	100.0(30)	100.0(21)	100.0(32)	100.0(21)
FARMERS SPOUSE								
Neutral	100.0(18)	85.7 (12)	100.0(11)	100.0(3)	75.0 (9)	66.7 (2)	70.0 (7)	61.1 (11)
Women biased	-	14.3 (2)			16.7 (2)	33.3(1)	10.0 (1)	27.8 (5)
Men biased		-			8.3 (1)	-	20.0 (2)	11.1 (2)
TOTAL	100.0(18)	100.0(14)	100.0(11)	100.0(3)	100.0(12)	100.0(3)	100.0(10)	100.0(18)

Table 4.26 above shows the gender bias of activities agents undertook with the farmers they visited and what the farmers who were not visited would like to have should they be visited.

No association was found between the activities undertaken by the male agents and farmers. The activities between the male agent and spouses of farmers visited showed a weak association with gender relations when the activities were gender neutral. The magnitude observed was high for spouses of men (100.0%) and low for spouses of women (85.7%), the δ(MW) was 14.3%. A similar trend was observed for the farmers who were not visited and with the spouses of farmers as shown in table 4.26.

The gender bias of activities with the female agent also showed a strong association with gender relations. It was high at the gender neutral level with men (83.3%) and low for women (61.1%), the δ(MW) above 20.0%. The association was also strong at the women biased level, high for women (33.3%) and low for men (3.3%) with a δ(MW) above 20.0%. The trend was similar at the level of spouses and those who were not visited, as shown in the table above.

Table 4.27 Consequences of Activity by Gender relations- Farmers perspective

RESULTS OF ACTIVITY	MALE AGENT				FEMALE AGENT			
	FARMERS VISITED %(N)		FARMERS NOT VISITED* %(N)		FARMERS VISITED %(N)		FARMERS NOT VISITED %(N)*	
FARMERS	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN
Better Output	89.4 (42)	96.6 (28)	100.0(15)	93.3(14)	93.3 (28)	100.0(21)	93.3 (28)	100.0(22)
Not Encouraging	10.6 (5)	3.4 (1)	-	6.7(1)	6.7 (2)	-	6.7 (2)	-
TOTAL	100.0(47)	100.0(29)	100.0(15)	100.0(15)	100.0(30)	100.0(21)	100.0(30)	100.0(22)
FARMERS SPOUSE								
Better Output	94.7 (18)	60.0(12)	63.2 (12)	42.9(6)	90.9 (10)	100.0(6)	97.6(20)	100.0(11)
Not Encouraging	5.3 (1)	40.0 (8)	36.8 (7)	57.1(8)	9.1 (1)	-	2.4(1)	-
TOTAL	100.0(19)	100.0(20	100.0(19)	100.0(14)	100.0(11)	100.0(6)	100.0(21)	100.0(11)

Table 4.27 above shows the perceived out comes of the activities conducted by agents with farmers. The perceived outcomes showed no association with gender relations. It however indicated that most of the men and women farmers, visited and not visited, acknowledge that the activities with agents lead to improvement in activities. At the male agent level the perceived outcome of farmers' activity at both the visited and not visited levels associated strongly with gender relations. It was high for spouses of men and low for spouses of women with δ(MW) in all cases higher than 20.0%.

The Perception of Agents of the Context of their Interaction with Farmers. The gender bias and consequences of the activities are shown in the following tables.

Table 4.28 Gender Bias of Activity by Gender - Agents' perspective

GENDER BIAS OF ACTIVITY	MALE AGENT FARMERS %(N) MEN	WOMEN	FEMALE AGENT FARMERS %(N) MEN	WOMEN
Gender neutral	80.9	35.8	100.0	62.5
Women biased	7.1	51.2	-	37.5
Men biased	11.9	12.8	-	-
TOTAL	100.0	100.0	100.0	100.0

Table 4.28 above shows the gender bias of activities male and female agents undertake with farmers. At the male agent level of interaction, a strong relationship, high for gender neutral activities with men (80.9%) and low for women (35.8%) was observed, with a δ(MW) above 20.0%. At the women biased level of activities association found was strong and low for men (7.1%) and high for women (51.2%), the δ(MW) was above (20.0)%. Male agents performed more gender-neutral activities with men than. With women they performed more women-biased activities.

The gender bias of activities with the female agents showed a strong association with gender relations. At the gender-neutral level, it was high for men (100.0%) and low for women (62.5%), the δ(MW) was more than 20.0%. At the level of the women biased activities, the association with gender relations was high for women (37.5% and low for men (0.0%), the δ(MW) was above 20.0%. The implication is that the female agent had more gender-neutral activities with men than with women but had more gender-neutral activities than women biased activities with women.

4.1.4. Intensity of relationship

The intensity of relationship indicates the closeness of men and women farmers to male and female agents.

Table 4.29 Intensity of Agent - Farmer and Farmers' Spouse Relationship by Gender Relations-Farmers perspective

INTENSITY OF RELATIONSHIP	MALE AGENT				FEMALE AGENT			
	FARMERS VISITED %(N)		FARMERS NOT VISITED* %(N)		FARMERS VISITED %(N)		FARMERS NOT VISITED* %(N)	
WITH FARMERS	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN
Weak	15.2 (7)	27.6 (8)	25.0 (3)	50.0 (7)	10.0 (3)	23.8 (5)	26.7 (4)	38.5 (5)
Close	84.8 (39)	72.4 (21)	75.0 (9)	50.0 (7)	90.0 (27)	76.2 (16)	73.3 (11)	61.5 (8)
TOTAL	100.0 (46)	100.0 (29)	100.0 (12)	100.0 (14)	100.0 (30)	100.0 (21)	100.0 (15)	100.0 (13)
WITH FARMERS' SPOUSE								
Weak	26.3 (5)	57.9 (11)	58.3 (14)	53.6 (7)	57.1 (8)	36.4 (4)	53.3 (8)	68.8 (11)
Close	73.7 (14)	42.1 (8)	41.7 (10)	46.2 (6)	42.9 (6)	63.6 (7)	46.7 (7)	31.3 (5)
TOTAL	100.0 (19)	100.0 (19)	100.0 (24)	100.0 (13)	100.0 (14)	100.0 (11)	100.0 (15)	100.0 (16)

The above table 4.29 shows that an association exists between the intensity of relationship between both male and female extension agents and their men and women farmers. This observed association was positive and weak with respect to farmers visited by the male agent, the values were 84.8% for men and 72.4% for women, the δ(MW) was 12.4% and 13.8% at the female agent level the values being 90.0% for men and 76.2% for women. The association of gender relations with the intensity of relationship was closer in all cases with men than women farmers visited. With the spouses of farmers who were visited at both the male and female agents' levels, the association between gender relations and intensity of relationship was strong the δ(MW) was greater than 20.0%. The association was

positive and high with respect to the male-spouses of men relationship and δ(MW) of 13.8% and negative with female-spouses of men relationship, the values being 42.9% for spouses of men and 63.6% for spouses of women.

Relationship with men was closer than with women for both male and female levels of interaction. At the spousal level, the relationship with spouses visited had been closer with intra-gender farmer visits.

Table 4.30 Nature of Agent Farmer Relationship by Gender Relations- Agent Perspective

	MALE AGENT		FEMALE AGENT **	
INTENSITY OF	FARMERS %(N)		FARMERS %(N)	
RELATIONSHIP	MEN	WOMEN	MEN	WOMEN
Weak	35.7 (5)	85.7 (12)	33.3(1)	66.7 (2)
Close	64.3 (9)	14.3 (2)	66.7(2)	33.3 (1)
Total	100.0 (14)	100.0 (14)	100.0 (3)	100.0 (3)

Table 4.30 shows the association between intensity of relationship and gender relationship from the agents' perspective. A strong, positive association with gender relations, that was high for men (84.3% and 66.7%) and low for women (14.3% and 33.3%)) in both the interactions at the male and female agents' levels with gender relations. The δ(MW) was greater than 20% in all cases.

Summary. Men and women farmers knew the male agent to the same magnitude. Fewer men than women knew the female agent. Both the male and female agents visited more men than women farmers. More farming husbands were visited than farming wives of farmers by the male agent when both or either of the couple were

visited. The female agents' paid visits to farming husbands and wives of farmers at the same rate.

Most of the farmers and visited and those who were not visited by the male and female agents said the visits were necessary. They also considered the visits to their spouses necessary, because they benefited from it. Whereas the men feel agents visit equal number of men and women farmers, the women said both male and female agents visit more men than women. Inferring that it could be possible that male agents visit more men more often than they do visit women farmers.

The frequency of visits reported shows that both male and female agents visited more men more frequently than women farmers. When agents visit farmers of their own sex, they easily interact with their spouses than when they visit farmers of the opposite sex. It may be concluded from the discussion so far that frequency of agent visits to farmers associated more positively with men than women farmers. The main reason for the differences was the readiness of farmers to receive the agent and the nature of activity being undertaken.

From the farmers' perspective, both male and female agents spent equal amount of time with men and women farmers. From the perspective of the female agent however spent more time with farming farmers' wives than farming farmers' husbands. The male agents' view was that they spent equal amount of time with men and women farmers this was in consonance with the farmers' view. Contrary to

the farmer's view, the female agents' perspective showed that they spent more time with men than women farmers. The explanation by the agents who spent more time with women farmers was related to attitude, and nature of need. The period spent depends on the disposition of the farmers, men or women, to make themselves available to the agent in a comfortable environment.

Most of the farmers showed positive sentiments about the visits to them or their spouses. A few of them, however showed indifference this was particularly so when the interactions involve inter-gender interaction with a spouse.

The farmers' perspective is that, there was no difference in the sentiments between men and women farmers and male and female agents for one another. At the spousal level, intra-gender sentiments were observed. Intra-gender sentiments were also observed at the agents' level. The female agents feel men farmers like them more than women farmers do. Also men farmers like it when female agents visit their wives. Women farmers are indifferent when female agents visit their husbands. Although men farmers like the male agents' visits to their spouses, a few of them were displeased about male agents visiting their wives.

Intra-gender biases were observed, with the agents feeling more comfortable and discussing farmers' personal problems with them.

Male agents felt more comfortable among farmers who were receptive of them and their teachings. They also felt comfortable with farmers whose companionship would not arouse suspicions of intimate relationship. The male agents are therefore, feel more comfortable with men than women farmers. The female agent was indifferent to gender, she was comfortable with either but preferred the men because of their higher receptivity

More men visited the male agents than women. Given the opportunity more women would visit the female agent than men. The reason given for paying visits was guidance and for not paying visits was because they did not know the residence of the agents, minimal contact and that it is not necessary

More men farmers discussed personal problems with both the male and female agents than women farmers did.

The size of group of men or women farmers interacting with the male agent was the same. Although at the female agent level, an association was noticed between group size and gender relations in favour of more men interacting with the agent in large groups. The explanation given was that the women were not available. The women were thus met in smaller groups and therefore the intensity of interaction was expected to be greater with women than with men farmers.

Summary. The relationship between extension agents (male and female) and farmers was close for the men and weak for women in all cases.

Both male and female agents did mostly, gender-neutral activities with men and women farmers. The activities by male agents with women, from the farmers' perspective, were mostly gender neutral. The same trend was the view expressed by the female agent. The agents' perspective was that they did more women biased activities with women. All the farmers view the activities as beneficial.

4.2 The External System of the Interaction

The findings of the external system that elaborates relationship comprising the demographic, socio-economic and socio-cultural characteristics of the farmers and extension agents, and the culture of the organization with respect to agent-farmer relationship are presented below.

4.2.1 Characteristics of respondents

The findings in this section are presented showing the association between the following characteristics of gender of farmers and/or agents. The characteristics include factors such as the distribution of age, marital status, characteristics of spouses of the respondents, ethnicity, level of education and training. The spatial distributions of farmers' homes and farms, farmlands, and caretakers of the farm in the absence of respondents are presented. These characteristics constitute the

demographic and socio-cultural factors that could influence agent-farmer relationship.

4.2.1.1 Age distribution and marital status of farmers

Table 4.31 below shows that no association exists between farmers' age and gender. The farmers, men and women belonging to the categories of age groups shown are evenly distributed. The distribution of farmers categorised by age did not show association with gender.

Table 4.31 Farmers' Age distribution by gender

AGE	FARMERS %(N) MEN	WOMEN
Young = 35 years	27.4 (17)	31.8 (14)
Middle age 36-45 years	33.9 (21)	36.4 (16)
Old 46 + years	38.7 (24)	31.8 (14)
TOTAL	100.0 (62)	100.0 (44)

Table 4.32 Marital Status of farmers by gender

MARITAL STATUS	FARMERS %(N) MEN	WOMEN
Married	83.9(52)	77.3(34)
Single	8.1 (5)	4.5 (2)
Separated	4.8 (3)	-
Divorced	1.6 (1)	9.1 (4)
Widowed	1.6 (1)	9.1 (4)
TOTAL	100.0 (62)	100.0 (44)

The presentation in table 4.32 above shows that most of the farmers were married A few were single, divorced, separated or widowed. No association was found between farmers' marital status and gender.

Table 4.33 Age Distribution and Marital Status Controlling for Age Distribution of Extension Agents by Gender.

AGE CATEGORY	AGE DISTRIBUTION		MARRIED		SINGLE	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
Young - 25-35	21.4(3)	33.3(1)	14.3(2)	-	7.1(1)	33.3(1)
Middle - 36-45	57.2(8)	33.3(1)	57.2(8)	33.3 (1)		-
Old - 46-55	21.4(3)	33.3 (1)	21.4(3)	33.3 (1)		-
TOTAL	100.0(14)	100.0(3)	92.9(13)	66.7(2)	7.1(1)	33.3(1)

In table 4.33 above, can be seen that an association exists between age of the agents and gender. This association was found to be weak and high at the young and old level for female agents. More female agents belong to the young and old categories (33.3% each) than male agents (21.4%) the δ(MW) was 11.9%. Male agents, with δ(MW) above 20.0% dominated the middle age category

Marital status was found to be positive and strongly associated to gender. The association was high for male agents (57.2%) particularly at the middle age level (33.3%) for female agents; the δ(MW) was above 20.0%. At the level of the young agents, the males (14.3%) lowly associated to being single while the young females (33.3%) were associated to being single.

4.2.1.2 Characteristics of spouses of respondents

The characteristics of spouses of farmers and agents determined were their place residence, whether the occupation of farmers' spouses was farming and the location of their farms.

Table 4.34 Co-Residence of Farmers and their Spouses by Gender

RESIDENCE	FARMER %(N) Men	Women
Co resident	96.2 (50)	85.3 (29)
Non co-resident	3.8 (2)	14.7 (5)
TOTAL	100.0 (52)	100.0 (34)

A weak association was found between co-residence of farmers and their spouses and gender. Residence with spouse within the village showed a positive association which was high with spouses of men (96.2%) and low with spouses of women (85.3%), the δ(MW) was 11.1% as shown in table 4.34 above.

Most of the farmers' spouses live with them. However, more of the spouses of men live with them than the women's spouses did. The implication was that there were female-headed farming households in the sample.

Table 4.35: Farming as Occupation of Farmers Spouses by Gender.

FARMING	FARMERS %(N) Men	Women
Yes	84.6 (44)	91.9(34)
No	15.4 (8)	8.1 (3)
TOTAL	100.0(52)	100.0 (37)

No association was found between farming as occupation of farmers' spouses and gender. Most of the spouses of both men (84.6%) and women (91.9%) farm, as shown in table 4.35 above

Table 4.36 Location of farms of farmer spouses by gender

LOCATION	FARMERS %(N) Men	Women
Family farm with spouse	27.3 (12)	20.6 (7)
Family and personal farm	31.8 (14)	26.5 (9)
Personal farm	40.9 (18)	52.9(18)
TOTAL	100.0 (44)	100.0(34)

In table 4.36 above, a weak positive association was found between location of spouses' farms and gender. It was lowly related to men's spouses (40.9%) and highly associated with women's spouses (52.9%), the δ(MW) 12.0%.

Table 4.37 Place of Residence of agents and their spouses by gender

PLACE OF RESIDENCE	MALE AGENT %(N)	FEMALE AGENT %(N)
Agents		
• Resident within District	50.0 (7)	33.3 (1)
• Not resident within District	50.0 (7)	66.7 (2)
TOTAL	100.0(14)	100.0(3)
Agents Spouses		
• Resident within District	38.4 (5)	-
• Not resident within District	61.5 (8)	100.0(2)
TOTAL	100.0(13)	100.0(2)

Table 4.37 above shows that a weak association exists between the residence of agents and gender. Residence within the district was positive and highly associated

with male agents (50.0%) and negative and lowly associated to the spouses of female agent (33.3%), the δ(MW) was 16.7%.

Spousal co-residence within the district was found to be strong, negative and highly related male agent (38.4%). Non residence of agents' spouses was also strong, positive, and lowly related to male agents (61.5%) and highly related to female agents (100%) the δ(MW) was above 20.0%.

4.2.1.3 Ethnicity

The composition of natives and settler farmers was assessed. In the case of the settlers, an enquiry into their period of residence and intention of going back to settle at home was made. The ethnicity of the agents, their perception of the ethnic composition of farmers and the language they use in communicating with farmers was also investigated.

Table 4.38 Ethnic Distribution of Farmers by Gender.

ETHNICITY	FARMERS %(N) Men	Women
Natives	46.8 (29)	47.7 (21)
Settlers	53.2 (33)	52.3 (23)
TOTAL	100.0 (62)	100.0 (44)

Table 4.38 above shows that the distribution of farmers by ethnicity was not related to gender.

However, the agents' perspective showed that, a strong positive relationship exists between the distribution of farmers in the district and ethnicity as shown in table 4.39 below. Being a native highly associated to the higher percentage of farmers in the perspective of the male agent (35.5%) and female (66.7%) agents the δ(MW) was above 20.0%.

Table 4.39 Agents Perception of the Ethnic Composition of Farmers by Gender

	MALE AGENT		FEMALE AGENT	
COMPOSITION	NATIVE	SETTLER	NATIVE	SETTLER
0	7.1 (1)	-	-	-
1-25	7.1 (1)	35.7 (5)	-	66.7 (2)
26-50	21.4 (3)	35.7 (5)	-	33.3 (1)
51-75	28.5 (4)	21.4 (3)	33.3 (1)	-
76-100	35.7 (5)	7.1 (1)	66.7 (2)	-
	100.0 (14)	100.0 (14)	100.0 (3)	100.0 (3)
Mean	63.6	40.9	78.3	21.6

Table 4.40 Period of Residence of Settlers and Reason for Settling by Gender

	FARMERS %(N)	
PERIOD (years)	Men	Women
Below 10	21.2 (7)	21.7 (5)
Above 10	78.8 (26)	78.3 (18)
TOTAL	100.0 (33)	100.0 (23)
REASON		
To farm	75.8 (25)	65.2 (15)
Birth place and marital home	24.2 (8)	34.8 (8)
TOTAL	100.0 (33)	100.0 (23)

In table 4.40 above, no association was found between period of residence in the district and gender of the settlers. The reason for settling in the district was however found to show a weak association with gender of settlers. Farming, as the purpose of settling in the District, showed a positive association with gender, it was highly associated with men (75.8%) and lowly associated with women (65.2%) settlers the δ(MW) was 10.6%. When place of birth and marital home was the purpose of settling in the district, it found to be negatively related to gender, highly to women (34.8%) and lowly related to men (24.2%) settlers, the δ(MW) was 10.6%.

Table 4.41 below shows a weak association between settlers' intention of going back to reside in their hometowns and gender. The association was negative and high for men (12.1%) settlers. The association between the settlers and intention of going back to settle at home was negative and high for women (100.0%) and negative and low for the men (87.8%), the δ(MW) was 12.1%.

Table 4.41: Settlers Intention of going back home and reasons by gender

INTEND GOING BACK	FARMERS %(N) Men	Women
Yes	12.1 (4)	-
No	87.8 (29)	100.0(23)
TOTAL	100 (33)	100.0 (23)
REASON NO INTENTION OF SETTLING BACK HOME		
Home	48.0 (12)	61.9 (13)
Favourable conditions for farming	52.0 (13)	38.1 (8)
TOTAL	100.0 (25)	100.0 (21)

The reasons why settlers would not settle back at home weakly related to gender as shown in table 4.41 above. The settlers consider the district their home, was found to be negative and lowly associated to men (48.0%) and positive and highly associated to women (61.9%), the δ(MW) was 13.9%. The rest found the district favourable for farming. This associated was positive and high for men (52.0%) and negative and lowly for women.

In table 4.42 below no association between ethnicity of agent and gender was found. Language used in communicating with farmers however showed a weak association with gender. The use of the local language was found to be positive and highly associated to the female (100.0%) and positive lowly associated to the male agent (85.7%), the δ(MW) was 14.3%. The use of English language, soliciting the services of translators was found to be negative and highly associated to male agents.

Table 4.42 Agents Ethnicity and Language for Communicating with Farmers By Gender

	Male Agents %(N)	Female Agents %(N)
Ethnicity of agent		
• Native	7.1(1)	-
• Not a native	92.9(13)	100.0(3)
TOTAL	100.0(14)	100.0(3)
Language for communicating with farmers		
• Local language	85.7(12)	100.0(3)
• English	14.3(2)	-
TOTAL	100.0(14)	100(3)

All the female agents and most of the male agents although they were not natives, they were able to communicate in the local language with both men and women

4.2.1.4 Educational status and training

The levels of illiteracy, highest level of attainment of formal education and training in agriculture were assessed. The findings are presented below for men and women farmers.

Table 4.43 below shows that a weak association exists between formal training in agriculture and gender. This was negatively high and low for men (25.8%) and women (6.8%) respectively; the δ(MW) was 19.0%. Among the farmers who had had formal training in agriculture, only men attended workshops and seminar (81.1%), this was positively strong for men and weak for women. Training at demonstration homes was highly positive in favour of women (66.7%); the δ(MW) was above 20.0%.

Table 4.43 Educational Level of Farmers by Gender

LEVEL OF EDUCATION	FARMERS %(N)	
	Men	Women
Illiterate	21.0 (13)	63.6 (28)
Primary	19.4 (12)	15.9 (7)
Middle /JSS	48.4 (30)	18.2 (8)
Secondary /Tertiary	11.3 (7)	2.3 (1)
TOTAL	100.0 (62)	100.0 (44)

The demonstration homes were staffed by female agents for women. The rest were trained at Farm institutes. All the training was organised by MoFA.

Table 4.44 Formal training of farmers in agriculture by gender

HAD FORMAL TRAINING IN AGRICULTURE	FARMERS %(N) Men	Women
Yes	25.8 (16)	6.8 (3)
No	74.2 (46)	93.2 (41)
TOTAL	100.0 (62)	100.0 (44)
Training organisation		
Farm institute (MoFA)	18.8 (3)	33.3 (1)
Demonstration home (MoFA)	-	66.7 (2)
Workshop/Seminar (MoFA)	81.1 (13)	-
TOTAL	100.0 (16)	100.0 (3)

Table 4.45 Agents Academic Qualification, and Training on Gender Issues by Gender.

ACADEMIC QUALIFICATION AND TRAINING ON GENDER RELATED ISSUES	Male Agent %(N)	Female Agent %(N)
Highest level of academic qualification		
• Certificate in Agriculture	64.3(9)	33.3(1)
• Diploma in Agriculture	35.7(5)	66.7(2)
TOTAL	100.0(14)	100.0(3)
Trained in gender issues in relation to operations.		
Yes	42.9(6)	-
No	57.1(8)	100.0(3)
TOTAL	100.0(14)	100.0(3)
Issues trained on		
Soya utilisation for domestic use; the role of men and women in rice; production; marketing and farm management	50.0(3)	Nil
Do not know	50.0(3)	Nil
TOTAL	100.0(13)	Nil

On whether they had been trained in gender issues in relation to their operations, a strong negative association was found with gender. This association was found to be low for male (57.1%) and high for females (100.0%), the δ(MW) was above 20.0%. Half of the men who had been trained said the training had been on.

Soya utilisation for domestic use.

The role of men and women in rice production.

Marketing and farm management

The rest could not state the subject of their training.

4.2.1.5 Composition of farmers and their distribution

The agents' perceptions of the composition of farmers in the sub-districts, the composition of their contact farmers, the spatial distribution of farmers' homes and their farms were analyzed by gender in the following observations.

Table 4.46 Agents Perception of the Composition of Farmers within Sub-Districts by Gender Relations

COMPOSITION OF FARMERS (%)	MALE AGENT FARMERS %(N)		FEMALE AGENT FARMERS %(N)	
	MEN	WOMEN	MEN	WOMEN
1-25	-	27.3(3)	-	33.3(1)
26-50	18.2(2)	45.5(5)	33.3(1)	33.3(1)
51-75	54.5(6)	27.3(3)	66.7(2)	33.3(1)
76-100	27.3(3)	-	-	
TOTAL	100.0(11)	100.0(11)	100.0(3)	100.0(3)

In table 4.46 above, the perception of the agents showed a strong association between gender relations and composition of farmers in favour of men farmers. The

perception was that above 50% of the farmers were men was held by 81.1% of the male agents and 66.7% of the female agents in their sub-districts, the δ(MW) was above 20.0%.

Table 4.47 Composition of Contact Farmers by Gender Relations- Agents Perception

CONTACT FARMER COMPOSITION (%)	MALE AGENT FARMERS %(N) MEN	MALE AGENT FARMERS %(N) WOMEN	FEMALE AGENT FARMERS %(N) MEN	FEMALE AGENT FARMERS %(N) WOMEN
1-25	-	36.4(4)	-	33.3(1)
26-50	9.1(1)	54.5(6)	33.3(1)	33.3(1)
51-75	54.5(6)	9.1(1)	33.3(1)	33.3(1)
76-100	36.4(4)	-	33.3(1)	-
TOTAL	100.0(11)	100.0(11)	100.0(3)	100.0(3)

Table 4.47 above shows the contact farmer composition of men and women for male and female agents. It showed a strong positive association between gender relations and the composition of contact farmer extension agents work with. A composition of more than 50.0% men characterised 90.0% of the male and 66.7% of the female agents, the δ(MW) was well above 20.0%.

Table 4.48 below shows the agents perception of commonest spatial distribution of the farmers' dwellings and farms within their sub-districts. Clustered homes were the mode of spatial distribution of dwellings. It was so in 50.0% of the male operated areas and 100.0% of the female operated areas.

Table 4.48 Spatial Distribution of Farmers Dwellings and Farms by Gender

SPATIAL DISTRIBUTION	MALE AGENTS %(N)	FEMALE AGENT %(N)
DWELLINGS		
• Densely distributed	28.6(4)	-
• Farmsteads	21.4(3)	-
• Clustered homes	50.0(7)	100.0(3)
TOTAL	100.0(14)	100.0(3)
FARMS.		
• Blocks	7.1(1)	-
• Isolated units	92.9(13)	33.3(1)
• Farmsteads	-	66.7(2)
TOTAL	100.0(14)	100.0(3)

The mode of distribution of farms was isolated units mostly in the male operated areas (92.9%) and farmsteads in the female (66.7%) operated areas. The farmers lived closely together but their farms were sparsely spread.

4.2.1.6 Farm lands

In this section the findings on farmland holdings, number of fields owned and land tenure systems practised are presented.

Size of farm land holdings..

Table 4.49 Total Land Holdings of Farmers by gender

SIZE OF HOLDINGS (ACRES)	FARMERS %(N)	
	MEN	WOMEN
Small 2>=	30.7(19)	59.1(26)
Medium 3-6	20.8(13)	29.6(13)
Large 7+	48.4(30)	11.4 (5)
TOTAL	100.0(62)	100.0 (44)

Range = 1-200 acres

In table 4.49 above the total land holdings show an association with gender particularly at the small and large levels. The association between farm size and gender was negative and high for women (59.1%) and positive and low for men (30.7%) at the small category. The large category of more than seven acres was positive and high for men (48.4%) and negative and low for women (11.4%), the δ(MW) in each case was above 20.0%.

The holdings of most women are smaller than that of men. The largest holding of 200 acres belong to a man, who was the village chief.

Number of fields per respondent

Table 4.50 Number of Fields Owned per Farmer by Gender.

NUMBER OF FIELDS	FARMERS %(N) Men	Women
1 - 2	43.6(27)	70.5 (31)
3 - 4	33.8 (21)	25.0 (11)
6+	22.6 (14)	4.6 (2)
TOTAL	100.0 (62)	100.0 (44)

Range - Men 1-28 Women 1-7

The association between number of fields owned and gender was found to be negatively strong, as shown in table 4.50 above. Most of the farmers belong to the category that has lower category of 1-2 fields, however, more of the women (70.5%)

belong to this category than the men (43.6%), the δ(MW) in each case was above 20.0%.

Generally, the men owned higher number of fields than women (22.6% and 4.6% respectively) had six or more fields.

Land tenureship

Table 4.51 Distribution of Land Tenure Arrangement by gender

ARRANGEMENT	FARMERS %(N) Men	Women
Share cropping	21.0(13)	29.6 (13)
Leasehold/rental	37.1 (23)	29.6 (13)
Ownership/ Family land	41.9 (26)	40.9 (18)
TOTAL	100.0 (62)	100.0 (44)

The land tenureship arrangement practised showed no association with gender as shown in table 4.51 above. Men and women farm on lands with identical tenure systems

Table 4.52 Influence of Land Tenure Arrangement on Farmers Attitude Towards Farming by Gender

INFLUENCE OF LAND TENURE ARRANGEMENT	FARMERS %(N) MEN	WOMEN
Motivates to work to facilitate payment	46.2 (18)	25.0 (8)
No influence	53.8 (21)	75.0 (24)
TOTAL	100.0 (39)	100.0 (32)

Table 4.52 shows that land tenure system involving some payment for land use, motivates farmers to work harder to enable them pay for the land use. This was found to be highly associated with men (46.2%) than women (25%), the δ(MW) was above 20.0%.

4.2.1.7 Non farming activities

Involvement in non-farming activities showed a strong association with gender. It was found to be negative and low with respect to men (35.5%) and positive and high with respect to women (59.1%), as shown in table 4.54, the δ(MW) was above 20.0%. Women mostly engage in non-farming income generating activities, while the rest did farming only.

Table 4.53 Involvement in Non-farming Activities and its effect on Participation in Extension Activities - Farmers Perspective

ENGAGED IN NON FARMING ACTIVITIES	FARMERS %(N) MEN	WOMEN
Yes	35.5 (22)	59.1 (26)
No	64.5 (40)	40.9 (18)
TOTAL	100.0 (62)	100.0 (44)
NON FARMING ACTIVITIES AFFECT PARTICIPATION IN EXTENSION ACTIVITIES		
Yes	13.6 (3)	15.4 (4)
No	86.4 (19)	84.6 (22)
TOTAL	100.0 (22)	100.0 (26)
REASON FOR EFFECT		
Do not have enough tine	10.0 (2)	13.0 (3)
Makes time for both	90.0 (18)	87.0 (20)
TOTAL	100.0 (20)	100.0 (23)

No association was found between effect of participation in non-farming activities and gender. Most of men (86.4%) and women (84.6%) involved said the non-farming activities did not affect their participation in extension activities because they make time for both activities as shown in table 4.53.

4.2.1.8 Proxy care takers farmers' perspective.

In the absence of men, mostly women (48.8%) took care of their farms, and the converse, mostly men, (70.5%) taking care of women's farms in their absence also apply as shown in table 4.56 above.

Summary

The distribution of age among men and women farmers was even. Among the agents however the males tended to belong to the middle age category and were mostly married. The females of the old category were also married. The unmarried males and females belong to the young category.

Spousal co-residence was associated with more men than women farmers. The spouses of most of the respondents were farmers. More of the men's spouses farm with them than the women's spouses did. Few of the male agents' spouses live with them in the district. All the married female agents neither live in the district nor do their spouses.

In the view of the agents, the farmers were composed of more natives than settlers. From what was gathered from the farmers however, the settler composition of men

and women was equal. The period of settlership was gender neutral. Although both men and women settlers were in the district to farm, more men settled for the purpose of farming than women. The reason given by the women for settling was mostly marital. Most of the men and all the women did not intend going to settle back home. They considered the present place of residence as home, their place of birth and, particularly in the case of the women, their marital home.

Most of the agents were not native but they could communicate in the local language with the farmers. A few of the male agents could not speak the local language and had to seek the services of interpreters.

Illiteracy was higher among the women than the men. Higher education was associated with more men than women. Training in agriculture was more men oriented than women oriented. No woman attended a workshop, which involved travelling away from home. The women who had training did so at the demonstration homes specifically operated by female agents for women. Both men and women were trained at farm institutes.

The academic qualification of most of the female agents was higher, diploma in agriculture, than of most of the male agents. All of the females and most of the male agents had had no training in gender issues related to their work. A few of the male agents had been trained in gender related issues.

The agents, both male and female perceive the composition of farmers in their subdistricts as having more men than women. The contact farmer composition of both male and female agents was made up of more men than women farmers.

Men had larger farm sizes and higher number of fields than women had. Women took care of the farms in the absence of the men and vice versa.

The system of land tenureship was gender neutral. When land tenureship arrangements involve some sort of payment, more men were motivated to work harder than women were.

More women were engaged in non-farming activities than men were. This does not affect their participation in extension activities of most of them because they made time for both activities.

There was no cultural or religious regulation that hinder male - female interaction.

4.2.3 Organisational policies and strategies

A strong relationship was observed between knowledge of the policy of DAES on gender and gender of the agent. Half of the males and all the females said they did not know the policy, 35.5% of the males said they are to teach both men and women farmers to adopt technology. The rest of the males (14.3%) said they are to work with men and women farmers in groups as shown in table 4.54 below.

The strategies they knew were that; they were to work with men and women farmers in groups and avoid creating circumstances that arouse suspicion of intimate relationship with farmers as shown in table 4.54

Table 4.54 Agents Knowledge of Organizational Policy and Strategy on Agent-Farmer Interaction by Gender

POLICY	Male Agent %(N)	Female Agent %(N)
• Do not know. • To teach both men and women farmers to adopt technology. • To work with male and female farmers in groups	50.0(7) 35.7(5) 14.3(2)	100(3) - -
TOTAL	100.0(14)	100.0(3)
Organisation communicated strategies on interaction with men and women farmers • Yes • No	 77.8(7) 22.2(2)	 66.7(2) 33.3(1)
TOTAL	100.0(9)	100.0(3)
Organisational strategies • Do not know. + 9* • The work with male and female farmers in groups. • Avoid creating circumstances that arouse suspicion of intimate relationship with farmers.	 16.7(1) 66.6(4) 16.7(1)	 33.3(1) - 66.7(2)
	100.0(6)	100.0(3)

The interview with the Deputy Director (operations) of DAES Mr. Franklin Donkor revealed that agents had been told to work with all farmers in groups. They were as a result expected to include both men and women. On the issue of the activities they were supposed to carry out with farmers, he said it was defined from the field being area specific.

Examination of the reporting format for the front-line agents showed that they were not gender segregated (Appendix 3).

4.2.4. Ecological factors that influence agent-farmer inter-gender and intra-gender interaction.

This section discusses factors that promote or retard agent-farmer gender relations.

Table: 4.55 Restriction on Male- Female Interaction by Gender. Agents perspective

RESTRICTION TO MALE-FEMALE INTERACTION	MALE AGENT %(N)	FEMALE AGENT %(N)
Yes	7.1 (1)	33.3(1)
No	92.9(13)	66.7(2)
TOTAL	100.0(14)	100.0(3)
REASONS		
• No restriction.	92.9(13)	66.7(2)
• Suspicion of intimate relationship with farmers.	7.1(1)	-
• Jealous that their wives would be rich.	-	33.3(1)
TOTAL	100.0(14)	100.0(3)

The relationship of restriction on male-female interaction and gender, in the agent view showed a strong negative association, high with male (92.2%) and low with female (66.7%) agents. The reasons given, as shown in table 4.55 were that there were no regulated, restrictive measures in place but a restriction that was attitudinal stemming out of suspicion and jealousy was observed.

All the farmers said there was no taboo, totem or religious regulation that bar male-female interaction.

Table 4.56 The influence of status as a staff of the Department of Agricultural Extension Services on association with farmers by Gender Relations - Agents perspective

EFFECT OF STATUS	MALE AGENT FARMERS %(N)		FEMALE AGENT FARMERS %(N)	
	MEN	WOMEN	MEN	WOMEN
They feel free interacting with agent.	28.6(4)	21.4(3)	-	-
For help.	71.4(10)	71.4(10)	66.7(2)	66.7(2)
For recognition as real.	-	-	33.3(1)	-
They feel inferior and shy unable to interact.	-	7.1(1)		-
Facilitated women's' group formation and access to credit.	-	-	-	33.3(1)
TOTAL	100.0(14)	100.0(14)	100.0(3)	100.0(3)

The influence of status and gender showed no association at the male level. At the level of the female agent, while her status influenced men to associate with her for recognition, it facilitated her work with women, the formation of women's groups for acquisition of formal credit. The status generally promoted agent farmer interaction that was not based on gender as shown in table 4:57 above.

Table: 4.57 Factors that enhance interaction with male agent by Gender Relations Controlling for Reason - Agents perspective

FACTORS THAT ENHANCE INTERACTION	DISCUSSIONS FARMERS %		YIELD FARMERS %		TEACH FARMERS %		TRUST FARMERS %		TOTAL	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
Visits	2.7	2.7	2.7	2.7.	8.3	2.7	-	-	13.8	8.1
Friendliness	25.0	21.0	-	5.5	-	5.5		7.3	25.0	39.4
Activities	13.9	21.0	5.5	2.7	41.7	26.2	-	-	61.2	49.9
Help.	-	-	-	-	-	-	-	2.7	-	2.7
TOTAL	41.6	44.7	8.2	10.9	50.0	34.4	-	10.0	100.0	100.0

Table 4.57 above shows that, the most important factors that enhance interaction with the male agent, were given as friendliness and extension activities for discussion and teaching.

Table: 4.58 Factors that retard interaction with male agent by Gender Relations Controlling for Reason - Agents perspective

FACTORS THAT RETARD CLOSENESS	Poverty %		Poor attitude of agents %		Reporting agents to supervisor s %		Unavail ability of inputs %		Inferiorit y comple x %		Women go after agents %		Early betrothal %		Too much work %		TOTAL %	
	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W
Loan recovery	5.4	10.3	-	-	-	-	2.7	-	-	-	-	-	-	-	-	-	8.1	10.3
Irregular visits	-	-	-	10.3	-	3.4	2.7	-	-	-	-	-	-	-	2.7	-	2.7	16.4
Not speaking their language	-	-	2.7	-	-	-		-	-	-	-	-	-	-	2.7	-	5.4	-
Concealment of information	-	-	27.0	-	2.7	-	-	-	-	-	-	-	-	-	8.1	-		37.8
Outspoken	-	-	2.7	-	-	-	-	-	-	-	-	-	-	-	-	-	2.7	-
Not attending meetings	-	-	8.1	-	-	-	13.5	-	-	3.4	-	-	-	-	-	-		21.6
Reject hospitality	-	-	5.4	-	-	3.4	-	-	-	6.8	-	3.4	-	-	-	-	5.4	13.6
Often seen with their women	-	-	-	6.9	-	-	-	-	-	-	-	3.4		10.8	-	-		10.8
Mistrust	-	17.2	-	20.7	-	-	-	-	-	3.4	-	3.4	-	-	-	-		0.3
Inaccessibility	-	-	-	3.4	-	-	-	-	-	-	-	-	-	-	-	-	-	3.4
Unfriendly	-	-	2.7	-	-	-	-	-	-	-	-	-	-	-	-	-	2.7	-
TOTAL	5.4	27.5	48.6	41.3	2.7	6.8	18.9	-	-	13.6	-	10.2	10.8	-	13.5	-	100.0	

Note M MEN FARMERS
W WOMEN FARMERS

Table 4.58 above shows that the main factor that impedes the male agents' interaction with men farmers is the concealment of information. While mistrust and poverty were the major factors that impeded their interaction with women farmers because of the poor attitude of some agents.

Table: 4 59 Factors that Enhance Interaction with Female Agent by Gender Relations Controlling for Reason - Agents Perceptive

FACTORS THAT PROMOTE INTERACTION	DISCUSSIONS FARMERS (%)		TEACH FARMERS (%)		AVOID SUSPICION FARMERS (%)		TOTAL (%)	
	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN
Visits	22.2	11.1	-	11.1	-	-	22.2	22.2
Friendliness	44.4	44.4	11.1	-	-	-	55.6	44.4
Extension activities	-	11.1	11.1	-	-	-	11.1	11.1
Help solve prob.	-	11.1	-	11.1	11.1	-	11.1	22.2
	66.7	77.8	22.2	22.2	11.1	-	100.0	100.0

Table 4.59 above shows that the most important factor that enhances the interaction of men and women farmers with the female agent was friendliness (55.6% men and 44.4% women) for the purpose of holding discussions (66.7% men and 77.8% women).

Table: 4.60 Factors that retard interaction with female agent by Gender, Controlling for Reason - Agents perspective)

FACTORS THAT RETARD CLOSENESS	POVERTY FARMERS %		UNAVAILABILITY OF INPUTS FARMERS %		INFERIORITY COMPLEX FARMERS %		MOBILITY FARMERS %		TOTAL FARMERS %	
	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN
Loan recovery	55.6	12.5	-	-	-	-	-	12.5	55.56	25.0
Irregular visits	-	-	11.1	-	-		-	-	11.1	-
Concealment of information	-	-	22.2	-	-	-	-	-	22.2	-
Not attending meeting	-	-	11.1	-	-	-	-	-	11.1	-
Reject hospitality	-	-	-	-	-	50.0	-	-	-	50.0
Mistrust	-	-	-	-	-	-	-	12.5	-	12.5
Inaccessibility	-	-	-	-	-	-		12.5	-	12.5
TOTAL	55.6	12.5	44.4	-	-	50.0	-	37.5		100.0 -

Table 4.60 above shows that the most important factor that retards interaction with men was loan recovery. Rejecting their hospitality retarded interaction with women. This is because the feel they will not have access to inputs in the case of men and inferiority complex in the case of women.

Table 4.61 shows below that the degree of association between male agents and men farmers was strong regardless of their marital status. It was strongest at the single (93.9%) and weakest at the separated men's level (57.1%).

Table: 4.61 Degree of Association of Extension Agents with Farmers by Gender Relations Controlling for Marital Status-Agents Perspective

DEGREE OF ASSOCIATION WITH FARMERS	INDIFFERENT TO GENDER %(N)		NO PROBLEM WITH THEM %(N)		DIFFICULT TO LOCATE %(N)		CLOSE RELATION DISAPPROVAL %(N)		TOTAL %(N)	
Single men	MA	FA	MA	FA	MA	FA	MA	FA	MA	FA
Very close	7.1(1).	66.7(2)	50.0(7)	-	-	-	-	-	57.1(8)	66.7(2)
Close	14.3(2)	-	21.4(3	33.3(1)	-	-	-	-	35.7(5)	33.3(1)
Fair	-	-	7.1(1)	-	-	-	-	-	7.1(1)	-
Total	21.6(3)	66.7(2)	78.7(11)	33.3(1)	-	-	-	-	100.0(14)	100.0(3)
Single women	MA	FA	MA	FA	MA	FA	MA	FA	MA	FA
Very close	14.3(2)	33.3(1)	-	-	-	-	-	-	14.3(2)	33.3(1)
Close	42.9(6)	33.3(1)	-	-	7.1(1)	-	-	-	50.0(7)	33.3(1)
Fair	-	33.3(1)	-	-	7.1(1)	-	7.1(1)	-	14.3(2)	33.3(1)
Weak	7.1(1)	-	-	-	14.3(2)	-	-	-	21.4(3)	-
Total	64.3(9)	100.0(3)	-	-	28.6(4)	-	7.1(1)	-	100.0(14)	100.0(3)
Divorced men	MA	FA	MA	FA	MA	FA	MA	FA	MA	FA
Very close										
Close	7.1(1)	33.3(1)	28.6(4)	-	-	-	-	-	35.7(5)	33.3(1)
Fair	7.1(1)	33.3(1)	28.6(4)	-	7.1(1)	-	-	-	42.9(6)	33.3(1)
	-	-	-	33.3(1)	-	-	21.4(3)	-	21.4(3)	33.3(1)
Total	14.3(2)	66.7(2)	57.2(8)	33.3(1)	7.1(1)	-	21.4(3)	-	100.0(14)	100.0(3)
Divorced women	MA	FA	MA	FA	MA	FA	MA	FA	MA	FA
Very close	-	-	14.3(2)	33.3(1)	-	-	-	-	14.3(2)	33.3(1)
Close	21.4(3)	-	21.4(3)	33.3(1)	-	-	-	-	42.9(6)	33.3(1)
Fair	-	-	14.3(2)	33.3(1)	21.4(3)	-	7.1(1)	-	42.9(6)	33.3(1)
Total	21.4(3)	-	50.0(7)	100.0(3)	21.4(3)	-	7.1(1)		100.0(14)	100.0(3)
Separated men	MA	FA	MA	FA	MA	FA	MA	FA	MA	FA
Very close										
Close	-	-	7.1(1)	-	-	-	-	-	7.1(1)	-
Fair	14.3(2)	33.3(1)	35.7(5)	33.3(1)	-	-	-	-	50.0(7)	66.7(2)
Weak	14.3(2)	-	7.1(1)	33.3(1)	14.3(2)	-	-	-	35.7(5)	33.3(1)
	-	-	-	-	7.1(1)	-	-	-	7.1(1)	-
Total	28.6(4)	33.3(1)	50.0(7)	66.7(2)	21.4(3)	-	-	-	100.0(14)	100.0(3)
Separated women	MA	FA	MA	FA	MA	FA	MA	FA	MA	FA
Very close	14.3(2)	-	-	33.3(1)	7.1(1)	-	-	-	21.4(3)	33.3
Close	7.1(1)	-	28.6(4)	33.3(1)	7.1(1)	-	-	-	42.9(6)	33.3
Fair	-	-	-	33.3(1)	7.1(1)		7.1(1)	-	14.3(2)	33.3
Weak	-	-	-	-	7.1(1)	-	14.3(2)	-	- 21.4(3)-	
Total	21.4(3)	-	28.6(4)	100.0(3)	28.6(4)	-	21.4(3)	-	100.0(14)	100.0(3)
Married men	MA	FA	MA	FA	MA	FA	MA	FA	MA	FA
Very close	7.1(1)	33.3(1)	35.7(5)	-	-	-	-	-	42.9(6)	33.3(1)
Close	7.1(1)	33.3(1)	35.7(5)	-	-	-	-	-	42.9(6)	33.3(1)
Fair	-		7.1(1)	33.3(1)	-	-	-	-	7.1(1)	33.3(1)
Weak	-	-	-	-	-	-	7.1(1)	-	7.1(1)	-
Total	14.3(2)	66.7(2)	78.6(11)	-	-	-	7.1(1)	-	100.0(14)	100.0(3)
Married women	MA	FA	MA	FA	MA	FA	MA	FA	MA	FA
Very close										
Close	7.1(1)	-	14.3(2)	33.3(1)	-	-	-		21.4(3)	33.3(1)
Fair	7.1(1)	-	21.4(3)	33.3(1)	-	-	-		28.6(6)	33.3(1)
Weak	-	-	7.1(1)	33.3(1)	21.4(3)	-	-	-	28.6(4)	33.3(1)
	-	-	-	-	14.3(2)	-	7.1(1)	-	7.1(1)	-
	14.3(2)	-	42.9(6)	100.0(3)	35.7(5)	-	7.1(1)1	-	100.0(14)	100.0(3)

Note: MA MALE AGENT STRONG = VERY CLOSE + CLOSE
FA FEMALE AGENT WEAK = FAIR + WEAK

Relatively, the degree of association of women farmers with male agents was weak. The degree of association was strongest at all levels of marital status with the male agent except the separated. At level the association with men was (64.3%) and women's level at which the strength was 57.1%.

The degree of association between female agents and farmers was strongest at the single men's' level (100%). For other categories of farmers, the degree of association was lower (66.7%).

Table: 4.62 How to Associate with Farmers by Gender - Agents' Perspective

	MALE AGENTS %(N)		FEMALE AGENTS %(N)	
Associate with men and women farmers differently.				
• Yes	64.3(9)		-	
• No	35.7(5)		100.0(3)	
	100.0(14)		100.0(3)	
Reasons				
Yes				
Unmarried women farmers should not be associated with differently; married women should be handled carefully.	14.3(2)		-	
To offset suspicion and trapping.	28.6(4)		-	
Because of their slow rate of adoption.	21.4(3)		-	
No				
Farmers are usually couples, so meet them in groups.	28.6(4)		-	
Equal attention, they are all farmers who need help.	7.1(1)		100.0(3)	
	100.0(14)		100.0(3)	
Suggestion on how agent-farmer association should be.	**Men**	**Women**	**Men**	**Women**
• Farmers should be met in groups.	7.7(1)	14.3(2)		-
• Association with farmers should be transparent.	53.8(7)	-	100.0(3)	-
• Meet men with their wives.	7.7(1)			-
• Associate with them for official reasons.	30.7(4)	-	-	-
• Build a trusting relationship	-	28.6(4)	-	33.3(1)
• Empathise with women's' constraint and slower pace	-	21.4(3)	-	-
• Associate closely with them to break the inferiority complex.	-	- 28.6(4)	-	66.7(2)
• Treat them as sisters and mothers not bed mates.	-	7.1(1)		-
	100.0(13)	100.0(14)	100.0(3)	100.0(3)

The association between degree of agents' association with farmers and gender relations, based on the marital categories showed an association discussed below. The degree of association of the male agent with both men and women farmers

showed a strong association with gender relations, except at the separated level where no association was observed (42.9% men and 35.7% women). The female agents' level of association showed no relationship with gender except at the single level, where the degree of closeness was 100% with men and 66.7% with women. In all cases where an association was observed, the association was closer with men than women farmers.

Most of the male agents (64.3%) felt there should be differences in the mode of association with men and women farmers. This was mostly to avoid suspicion of intimate relationship, seduction and also cater for differences in their adoption rates. The rest of the male agents and all the female agents felt there was no need to associate with them differently because they are all farmers and must be given equal attention.

Suggesting how agents should associate with men and women farmers, Most of the male agents said their association with men should be transparent (53.8%) official. With women farmers they said the association should be based on trust and reduced social distance.

Table: 4:63 Factors promoting Men's Co-operation with Extension Male Agents in Extension Activities - Agents' Perspective

	REASON FOR MEN FARMERS CO-OPERATION				TOTAL
FACTORS PROMOTING COOPERATION	Honour	Improvement in living standard	Mastery of skill	Solve problem	
Knowledge	-	35.7(5)	14.3(2)	-	50.0 (7)
Incentive	7.1(1)	-	-	-	7.1 (1)
Contact group	-	-	7.1(1)	-	7.1 (1)
Home visits	-	7.1(1)	-	-	7.1 (1)
Local projects	-	7.1(1)	-	-	7.1 (1)
Input supply	-	14.3(2)	-	7.1(1)	21.4 (3)
TOTAL	7.1(1)	64.3(9)	21.4(3)	7.1(1)	100.0(14)

The female agents said their association with men farmers should be transparent (100.0%), and with women farmers they should reduce social distance (66.7%).

Table 4.63 above shows that the most important factors that promoted the co-operation of men farmers with male agents are imparting knowledge (50.0%) and supply of inputs (21.4%). These help in the mastery of skills (21.4%) and improvement in standard of living (42.9%).

The factors that promote the co-operation of women with male agent as shown in table 4.64 below. They are the inclusion of their husbands in activities and giving them the same facilities as the men are given (14.4% each). These factors make them feel comfortable (35.7%) gives them encouragement (28.6%).

Table: 4.64 Factors Promoting Women's Co-operation with Male Agents And Reason

	REASON FOR WOMEN FARMERS CO-OPERATION WITH MALE AGENTS				
FACTORS PROMOTING COOPERATION	Feels comfortable	Good health & productivity	They are encouraged	No alternate measure	TOTAL
Husband's permission	7.1 (1)	-	-	-	7.1 (1)
Income generation			-	7.1 (1)	7.1 (1)
Involvement of male counterparts	7.1 (1)	-	-	7.1 (1)	14.3 (2)
Home management techniques		7.1 (1)	-	-	7.1 (1)
Friendly agent	-	-		7.1 (1)	7.1 (1)
Established groups	14.3 (2)		7.1 (1)	-	21.4 (3)
Visits and demonstrations	7.1 (1)	7.1 (1)	7.1 (1)	-	21.4 (3)
Same facilities as men	-	-	14.3(2)	-	7.1 (1)
Total	35.7(5)	14.3(2)	28.6(4)	21.4(3)	100.0(14)

Co-operation with female agents

Table: 4.65 Factors Promoting Women's Co-operation with Female Agents And Reason

FACTORS PROMOTING COOPERATION IN EXTENSION ACTIVITIES	REASON FOR CO-OPERATION WITH FEMALE AGENTS			
	Women Farmers			Men farmers
	Feels comfortable	Good health & productivity	TOTAL	Improvement in living standard
Husband's permission	33.3(1)	-	33.3(1)	-
Home management techniques	-	33.3(1)	33.3(1)	-
Visits and demonstrations		33.3(1)	33.3(1)	-
Knowledge				100.0(3)
TOTAL	33.3(1)	66.7(2)	100.0(3)	100.0(3)

Table 4.65 shows that women co-operate with female agents when they have the husbands' permission because they feel comfortable. Also visits, demonstrations and teaching of home management skills that improve upon the family health and productivity encourages women to co-operate in extension activities (33.3% each).

Men (100%) co-operate with female agents when they are given knowledge to improve upon their productivity and standard of living.

Table: 4.66 Influence of Gender Relations on Choice of Contact Farmer

Gender Influences Choice	MALE AGENT	FEMALE AGENT
Yes	50.0 (7)	33.3(1)
No	50.0 (7)	66.7(2)
TOTAL	100.0(14)	100(3)
Reason for Yes		
• Mostly women because the men go fishing.	7.1 (1)	-
• Men are receptive and have more time.	14.3 (2)	33.3(1)
• Depend on activity.	28.6(4)	
Reason for No		
• They should be treated equally.	28.6 (4)	-
• The hard working and motivated are selected.	14.3 (2)	-
• The farmers who are available	7.1(1)	66.7(2)
TOTAL	100.0(14)	100.0(3)

Table 4.66 above shows that half of the male and 33.3% of the female chose their contact farmers based on gender the rest did not. Those who did based their choice mostly on the gender bias of activity. The agents who did not based their choice on the equity (28.6%) and performance (14.3%) of the farmers.

Summary. The ecological characteristics affecting interaction and co-operation in extension activities show that there are no cultural and religious restrictions to inter - gender interaction. The official status of the extension agent facilitates access to men and women farmers.

Friendliness and extension activities were factors that enhance interaction by men and women farmers with the male and female agents. This was because they provided an environment for teaching and discussions. Concealment of information

retarded the interaction between the male agent and men farmers, while mistrust, poor attitude of extension agents and poverty of women retarded their interaction with women farmers.

The interaction between female agents and men was retarded by loan recovery because the men were poor and unable to repay their loans on schedule. Her interaction with women was retarded by social distance when they felt inferior.

The marital status had very little influence on the association of agents with men and women farmers. It was rather observed that male agent interacted more closely with men than women, this was because the male agent had no problem interacting with men and the female agent was indifferent to gender. Both male and female agents associated closely with single men farmers. The male agents' association with separated male farmers was weakest because they did not take their work seriously.

Whereas male agents felt there should be differences in the way agents associated with men and women farmers, the female agents felt otherwise. The male and female agents' reason were that the association with men should be transparent. With women farmers the social distance should be reduced to prevent inferiority complex.

The findings also showed that men co-operated more in extension activities with male and female agents for knowledge to improve upon their productivity and

standard of living. Women needed to be encouraged and made to feel comfortable to co-operate in extension activities with male and female agents. Additionally, women farmers co-operate with female agents for home management technology.

4.3 Participation in Extension Activities

Table 4.67 Participation in Extension Activities by Gender Relations- Farmer perspective

EXTENSION ACTIVITIES	LEVEL OF PARTICIPATION					
	Contacted both male and female agents		Contacted male only		Contacted female only	
	Farmers %(n)		Farmers %(n)		Farmers %(n)	
	Men	Women	Men	Women	Men	Women
Contact group (CG)						
1995	47.6(10)	27.8(5)	26.9(7)	9.1(1)	55.6(5)	-
1996	42.9(9)	27.8(5)	30.8(8)	-	55.6(5)	33.3(1)
Extension Test Plot (ETP)						
1995	14.3(3)	-	3.8(1)	-	22.2(2)	-
1996	-	-	3.8(1)	-	-	-
Farmers Production Plot (FPP)						
1995	28.6(6)	16.7(3)	7.7(2)	-	66.7(6)	33.3(1)
1996	33.3(7)	16.7(3)	11.5(3)	-	66.7(6)	33.3(1)
Farmers Day Durbar (FDD)						
1995	47.6(10)	22.2(4)	15.4(4)	-	55.6(5)	33.3(1)
1996	57.1(12)	44.4(8)	50.0(13)	27.3(1)	55.6(5)	33.3(1)
Mini Demonstration (MD)						
1995	23.8(5)	11.1(2)	30.9(8)	27.3(1)	11.1(1)	-
1996	14.3(3)	33.3(6)	26.9(7)	27.3(1)	11.1(1)	-
Verification Demonstration Plot (VDP)						
1995	9.5(3)	5.6(1)	15.4(4)	-	22.2(2)	-
1996	-	5.6(1)	3.8(1)	-	11.1(1)	-
Village Extension Motivator (VEM)						
1995	4.8(1)	-	3.8(1)	-	-	-
1996	4.9(1)	-	11.5(3)	9.1(1)	-	-

In table 4.67 above, the participation in extension activity by gender relations is shown on the basis of contact with extension agents. An association high for men

and low for women's participation in activities conducted with male and female agents was observed.

Table: 4.68 Participation in Demonstrations by Gender Relations- Agents perspective

	Male Agent		Female Agent	
Type of Demonstration	Farmers %(N)		Farmers %(N)	
	Men	Women	Men	Women
Field Crops	68 (14)	32	77(3)	23
Livestock	79 (14)	21	85(2)	15
WIAD	24 (9)	76	16(2)	84
Post harvest	58 (13)	42	58(3)	42
Field days	61 (4)	39 (4)	0	0

The level of participation in demonstrations conducted by male and female extension agents, male and female from the agents' perspective is shown in table 4.68 above. Participation in field crops, livestock and field day demonstrations was strongly related to gender relations, high for men and low for women farmers. Demonstration in post harvest management had a weak association with gender relations. It was also high for men and low for women WIAD activities related demonstrations were strongly related to gender, low for men and high for women. The trends reported as shown in the above table were the same for male and female agents.

Table 4.69 Participation in Extension Activities by Gender Relations - Agents Perspective

EXTENSION ACTIVITIES	MALE AGENT		FEMALE AGENT	
	FARMERS %(N)		FARMERS %(N)	
	MEN	WOMEN	MEN	WOMEN
Mini Demonstration				
1995	64.0(14)	35.0	72.0(2)	28.0
1996	68.0(14)	32.0	66.0(2)	34.0
Contact Farmers				
1995	70.0(13)	30.0	61.0(2)	39.0
1996	65.0(14)	35.0	64.0(3)	36.0
Extension Test Plot				
1995	69.0(8)	31.0	100.0(3)	0
1996	72.0(8)	28.0	0	0
Farmers Production Plot				
1995	66.0(7)	34.0	96.0(1)	4.0
1996	69.0(6)	31.0	100.0(2)	0
Village Extension Motivators				
1995	72.0(11)	28.0	68.0(2)	32.0
1996	72.0(12)	28.0	66.0(3)	34.0
Farmers' Day Durbar				
1995	53.0(14)	47.0	67.0(1)	33.0
1996	60.0(13)	40.0	0	0
Trials				
1995	75.20	25	0	0
1996	71.0(2)	29	0	0

Table 4.69 shows the level of participation in extension activities conducted by male and female agents with men and women farmers. In all the activities involving the provision of inputs the association between gender relations and participation was stronger at the level of both male and female agents and men than with women. In the case of Farmers' day celebration, which is a social activity, no association was observed in 1995 with gender relations at the male agent level of with the farmers. The female agent level of interaction with Farmers on Farmers' Day celebration showed a strong association with men than with women in 1995.

The inference from tables 4.67 4.69 is that; participation in the various activities was associated with men more than women do, irrespective of the gender of the agent. The exception was WIAD activities, which are women related, and so more women participated than men.

Table 4.70 Participation in Extension Activities by Gender Relations controlling for Physical contact between farmers and extension agents - Farmers perspective

PARTICIPATION IN EXTENSION ACTIVITY	FARMERS %(N)					
	Both Contacted		Male Contacted		Female contacted	
	Men	Women	Men	Women	Men	Women
Nil	14.3(3)	21.8 (5)	12.8 (6)	27.6 (8)	13.3 (4)	33.3 (7)
Low	19.0(4)	55.6(10)	34.0 (16)	58.6 (17)	23.3 (7)	47.6(10)
High	66.7(14)	16.7 (3)	53.2 (25)	13.8 (4)	63.3(19)	19.0 (4)
TOTAL	100.0(21)	100.0(18)	100.0(47)	100.0(29)	100.0(30)	100.0(21)

Table 4.70 above shows that an association exists between participation in extension activities and gender at all levels of contact with extension agents, both male and female. At nil and low participation, the association was high for women farmers and low for men farmer at all levels with a δ(MW) above 10.0%. High participation had a strong association with gender. It was positive and high for men and negative and low for women farmers at all levels, the δ(MW) was above 20.0% irrespective of the gender of the agent.

A similar trend of association was observed in table 4.71 below showing the agents' perspective.

association in favour of men was observed at high participation and all levels of relationship and gender, the δ(MW) was above 20.0%.

The same trend was observed in the association shown in table 4.73 below.

Table: 4. 73 Level of participation in Extension Activities by Gender Relations controlling for Strength of Relationship - Agents perspective

PARTICIPATION IN EXTENSION ACTIVITIES	MALE AGENT				FEMALE AGENT			
	Weak Relationship		Strong Relationship		Weak Relationship		Strong Relationship	
	Men	Women	Men	Women	Men	Women	Men	Women
Low	20.0(1)	83.3(10)	22.2(2)	100.0(2)	100.0(1)	100.0(1)	50.0(1)	100.0(2)
High	80.0(4)	16.7(2)	77.8(7)	-	-	-	50.0(1)	-
TOTAL	100.0(5)	100.0(12)	100.0(9)	100.0(2)	100.0(1)	100.0(1)	100.0(2)	100.0(2)

From Tables 4.73 and 4.74 it can be inferred that participation in extension activities, associated highly with men than women farmers, irrespective of gender of agent and strength of relationship.

There was no association between participation and gender at the female level when the relationship was weak. When the relationship was strong however, the association between participation and gender was strong with low participation of women and high participation of men with a δ(MW) above 20.0% (table 4.74).

The following tables (4.73-75) show the association between the strength of relationship and gender controlling for level of participation in extension activities.

Table: 4.74 Strength of Relationship by Gender Relations controlling for Level of Participation in Extension Activities with Male agents - Farmers perspective

Strength of Relationship	Nil Participation		Low Participation		High Participation	
	Men	Women	Men	Women	Men	Women
Weak	16.7(1)	37.5(3)	25.0(4)	35.3(6)	8.0(2)	-
Close	83.3(5)	62.5(5)	75.0(12)	64.7(11)	92.0(23)	100.0(4)
TOTAL	100.0(6)	100.0(8)	100.0(16)	100.0(17)	100.0(25)	100.0(4)

Table 4.74 above shows that at nil level of participation in activities with the male agent, the association between strength of relationship and gender was strong, the δ(MW) was above 20.0%. It was higher for men with both male and female agents than women farmers (tables 4.74 above and 4.75 below from the farmers' perspective).

At low participation the association between strength of relationship with male agent and gender was weak in favour of men, δ(MW) 10.3%. At high participation, no association was found between strength of relationship and gender at the level of the male agent. A weak association between strength of relationship with the female agent and gender, was however, found at the high level of participation which was high for women (100.0%) and low for men (84.2%) with a δ(MW) 15.8.

Table: 4 75 Strength of Relationship by Gender Relations controlling for Level of Participation In Extension Activities with Female agents - Farmers perspective

Strength of Relationship	Nil Participation		Low Participation		High Participation	
	Men	Women	Men	Women	Men	Women
Weak	-	25.6(2)	-	30.0(3)	15.8(3)	-
Close	100.0(4)	71.4(5)	100.0(7)	70.0(7)	84.2(16)	100.0(4)
TOTAL	100.0(4)	100.0(7)	100.0(7)	100.0(10)	100.0(19)	100.0(4)

The agents' (male and female) perspective of the association between the strength of relationship and gender at various levels of participation in extension activities is shown below in table 4.76. Their view was that irrespective of the level of participation they had a closer relationship with more men than women farmers did. The δ(MW) was more than 20.0% in the association with male agents at all levels of participation and female agents at high level of participation. At low level of participation with the female agent, the association was weak, δ(MW) was 10.0%.

Table: 4.76 Strength of Relationship in Extension Activities with Agents by Gender Relations controlling for Level of Participation - Agents perspective

Strength of Interaction	MALE AGENT				FEMALE AGENT			
	Low Participation		High Participation		Low Participation		High Participation	
	Men	Women	Men	Women	Men	Women	Men	Women
Weak	33.3(1)	83.3(10)	36.4(4)	100.0(2)	50.0(1)	33.3(1)	-	-
Close	66.7(2)	16.7(2)	63.6(7)	-	50.0(1)	66.7(2)	100.0(1)	-
TOTAL	100.0(3)	100.0(12)	100.0(11)	100.0(2)	100.0(2)	100.0(3)	100.0(1)	-

Summary

Table 4.77 Degree of Association between Relationship and participation by Gender Relations

	Controlling for strength of relationship							
	MALE AGENT				FEMALE AGENT			
	LOW		HIGH		LOW		HIGH	
High level of Participation	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN
FARMERS VIEW	High	Low	High	Low	High	Low	High	Low
AGENTS VIEW	High	Low	High	Low	Equal	Equal	High	Low
Close relationship	Controlling for level of Participation							
FARMERS VIEW	High	Low	Equal	Equal	High	Low	Low	High
AGENTS VIEW	High	Low	High	Low	High	Low	High	Low

The level of participation and gender always had a high value at the male agents' level for men irrespective of the strength of the relationship and gender of agent. A similar trend was observed at the female agents' level except that at low strength of relationship, participation could be equal. Women farmers and male and female agents could have close relationship at high levels of participation in the perception of the farmers.

CHAPTER 5

DISCUSSIONS

5.0 Introduction

A presentation of the discussions of the study is made in this chapter. It focuses on the elements of extension delivery studied, which include inter-gender and intra-gender extension agent-farmer relationship and participation in extension activities. Considering the agent-farmer relationship as a system, the interpersonal dynamics between the agent and farmer form the internal system, while all other factors that modify it belong to the external system.

The Internal and External Systems. The interpersonal dynamics or elements of the internal system are made up of interactions, sentiments and activities and the mutual influence these elements have on each other. Persons involved in an interaction develop sentiments for one another, which may be expressed in activities. The sentiments developed tend to propel the interaction, which is modified by the external system. The external system is composed of demographic and ecological factors (Homans, 1951 and Levenson, 1979).

An overview of the findings of the study indicates that both male and female agents had closer relationship with men than women farmers. Also, more men farmers participated highly in extension activities than women farmers, irrespective of the gender of the agent, except in WIAD activities. In WIAD activities conducted with the male and female agents more women farmers participated highly than men farmers.

Women who participated more in extension activities have closer relationship with both male and female agents than men at the same level of participation in extension activities. There was mixed association between relationship and participation for men farmers. The participation of men farmers in extension activities did not necessarily follow the closeness of relationship between them and both male and female agents. The ecological factors that influenced agent-farmer relationship favoured both male and female agent-men farmers' relationships. The factors that favourably influence women farmer-agent relationship were female agent biased.

5.1 The Internal System

The elements of the internal system of the agent-farmer relationship mentioned above, namely interaction, sentiments and activities are discussed below. The factors of the external system are discussed later.

5.1.1 Interaction

Interactions can occur with or without mutual exposure, intermittently or spanning over a period. The interaction of interest in this study was that which involves mutual exposure and repetitive occurrence. Each episode characterised by a period of mutual exchange that could lead to the establishment of a relationship and not the intermittent type.

Mutual exposure. Interactions are most likely to occur where participants have mutual exposure, in a face to face contact. This is because interaction is the mutual influence of people in contact with each other (Heap 1977) and the combination of

sight, tone, gestures and hearing re-enforce communication with more profound outcomes than hearing alone. If the contact is rewarding to both participants there is high probability that the contact would be repeated. (Mc Phee 1966). Status roles, expectations and mutual interests develop during face to face interactions. "Individuals in physically close contact, come to like one another and form groups more often than physically distant persons" (Thomas 1967 in Douglas 1970:10). For an interaction to take place physical contact must be accompanied by social contact. Interaction is not possible without social contact, according to (Chitambar 1973:266), "social contact as distinct from physical contact, exists when there is reciprocal response and 'an inner adjustment of behaviour to the actions of others' [Sutherland,1961:99]".

These characteristics are seen in the work of the extension agent, in Ghana. The mode of operation is basically face to face interaction, since they function mostly by visits and meetings. In this study, although there was no difference in physical contact between male agents and men and women farmers, there was more social contact between male agents and men than women farmers are by way of direct visits to them. The farmers found the visits rewarding. The implication is that male agents were disposed to conditions that enhance the development of mutual influencing and interaction with more men than with women farmers.

In this study, more women farmers had physical contact with the female agent than men farmers did. However, her social contact with men farmers who had physical contact with her was higher than her social contact with women farmers who had

physical contact her. The higher female agent-women farmers' physical contact could have been as a result of the women-targeting role of most female agents under WIAD. It was likely the men farmers were not aware that the female agents, at the time, were playing a similar role as the male agent. When all female agents started visiting men contact farmers, under NAEP, men farmers availed themselves of their services better than the women farmers did. Since mutual influencing of participants in an interaction is better achieved under social contact than physical contact (Heap, 1977). The female agent was therefore, bound to have a better interaction with men than women farmers

The results of the study showed that with respect to both male and female agents, farmers had more social contact with men than women farmers. They were in a position to communicate orally and with gestures. The farmers found the visits rewarding because they acquired knowledge from the agents. They established the role of learner and teacher with the farmers expecting to learn from what the agents were obliged to teach. These are in line with the theoretical expectations of the conditions for mutual influencing. The men farmers, who were heads of households, received more visits from both male and female agents than women headed households. A similar report was made by Walker (1990), on a study in the South West Province of Cameroon by Almy and others, in 1988, which showed that, extension workers were better known to male-headed farming households than female headed households.

The fact that mutual contact enhances the development of relationships was also illustrated in the following studies. Lundberg et al. (1949), working on the sociometric choices for future contact after leaving college, found that 61% of the women in residence chose other women in their own houses. Muir (1990), comparing Black and White integration attitudes on Deep-South Campus of the University of Alabama, found that Black and White students were more accepting of each other in social activities at the school because they had been close together for a period. Since both male and female agents have mutual contact with more men than women farmers do, it implies that there was higher possibility for both male and female agents to have closer relationship with men than women farmers do.

Frequency of interaction. The findings of the study showed that there was frequent and repetitive interaction between agents and farmers. According to Thibaut and Kelly (1959:10), "two persons are said to have formed a relationship if they interact on several different occasions". (Shaw, 1976:120) stated that, "the more frequently people interact together, the more alike they become in some respects", [such as their perceptions and activities]. People engaged in repeated interactions with one another, develop interpersonal relationship with one another (Hewitt, 1984).

The rate, at which the interactions occurred, in the study, showed that both male and female agents interacted more frequently with more men than women farmers did. It therefore follows that both the male and female agents were more apt to develop a relationship with men than women farmers were as postulated by Heap (1977). The notion that extension agents visit more men more frequently than women farmers is

collaborated by Walker (1990:1) who reported on two different studies. The first was by Stuadt (1982) who studied extension activities in Kenya and found out that, "farms managed jointly by a farming couple received at least one visit in 75 percent of the cases yet women-managed farms were visited in 50 percent of the cases". The second study by Due, et al. (1987) in the Tanga region of Tanzania produced similar results that: "Jointly managed farms were four times more likely than female-managed farms to receive at least one extension visit".

Muir's work in (1990), showed that frequent interaction leads to mutual acceptance and the development of relationship. Also, Mc Donough and Pastora-Grijalbo's (1987) documentation on language shift of the elite in industrial Barcelona, showed that the elite imposed Castilian on their native Catalan and preceding their society in the acquisition of a second language. This was done by familial organisations such as the control of institutions like schools and the media, which led to frequent elite interaction. The frequent interaction facilitated elite cohesion and development of close relationship. The implication is that the frequent male and female agent-men farmers interaction observed in the study, could lead to the development of a closer relationship of male and female agents and men than with women farmers.

Duration of interaction. When individuals associate with one another for a period of time, they become used to each other, their behaviour becomes adjusted to one another and perceive each other as good fellow (Heap, 1977). If the contact between individuals spans over a long period, they develop same opinion on issues of common interest, and if the contacts happen to be rewarding, it acquires the

potential for repetition, which predisposes the actors to the establishment of relationship.

The study revealed that, the time spent by agents with farmers depend on activity being executed. From the perspective of the men and women farmers and male agents in the study, there was no difference between the time spent by male and female agents with men and women farmers. There was therefore equal opportunity for interaction and the development of relationship between male and female agents and men and women farmers. The female agents' view was that, they spent more time with more men than women farmers did. The female agent is therefore likely to have closer interaction with the men than women farmers are.

Both agents and farmers considered the time spent together as worthwhile and beneficial. They had positive evaluations of the time spent together and were prepared to spend time with each other, which is a favourable condition for the more interactions.

Positive evaluations of conventionally intolerable situations, due to the modifying effect of a period of interaction, were observed in Muir's (1990) study. He found out that, Black and White seniors were more accepting of cross race interactions than freshmen, because the seniors had had longer periods of interaction than their juniors had. The findings on the period spent interacting means that men and women farmers had equal opportunity for developing relationship with male and female agents.

5.1.2 Sentiments

The sentiments of an interaction may be expressed covertly and overtly. It may be expressed in ways such as the feeling of 'like' for one another, by reciprocal visits and baring oneself to one another in trust. The development of these experiences is influenced by factors such as the number and composition of people involved in the interaction. All these factors contribute to the closeness of a relationship.

Feeling of Like. Homans (1951:111) stated that "persons who interact frequently with one another tend to like one another". According to Davis (1966:84), "if *Person* likes *Other* and *Other* likes *X*, *Person* will tend to like *X*". The feeling of 'like' among individuals involved in an interaction tends to draw them closer into a positive relationship with one another. The stronger this feeling, the closer the relationship that develops as a result of the interaction. Negative sentiments or the feeling of dislike leads to mutual avoidance by participants of an interaction.

The findings of the study indicated, both men and women farmers were found to be indifferent to the gender of the agent. Male and female agents liked paying visits to men and women farmers and men and women farmers like the visits by the agents. Therefore, based on Davis' (1966) statement in the preceding paragraph, the expectation is that the men and women farmers like the male and female agents doing the visits. This is confirmed by the finding that most of the men and women farmers were indifferent to the sex of the agent. According to Gura, (1985:3) the "gender of staff is perhaps less important as an extension criterion in reaching rural women than has been thought". She cited cases in Zaire, Kenya and Sri Lanka,

where male field agents who having understood women's production roles and needs have worked willingly and effectively with women producers.

The fact that people involved in an interaction over a period tend to like one another, is collaborated by the Western Electric Researches or Hawthone's experiments of the Bank Wiring Room (Homans, 1951). This experiment showed that the workers developed positive sentiments for one another and liked being together, in the room after staying together in a room over a period of time. Although the room was poorly illuminated, they preferred being in it together than being dispersed after the experiment. Also in the Relay Assembly Test Room Experiment (Homans, 1941 in Matteson and Ivancevich, 1993) the subjects (girls) expressed their liking for one another by "carrying" the tired one through, that is working harder to make up for her [although they knew it would not have mattered to management if they did not produce on her behalf.] They developed positive sentiments for one another, stronger than the sentiments they have for their environment. They were therefore more comfortable working together.

Trust. Discussing personal problems or baring oneself to another without fear of losing ones' identity, characterises a trusting or close relationship. Individuals who trust one another would discuss their personal problems with one another if they are close and vice versa. A farmer, who discusses his personal problems with an agent, on official duties, must be in a close relationship with that agent. Pincus and Minahan (1973:73) stated that, "people will more readily follow through on a change

effort and if necessary, take risks and make changes themselves, if they have ... developed trust and confidence in the worker"

The study showed that, more men farmers discussed their personal problems with male and female agents, while more women farmers preferred discussing their personal problems with female than male agents did. This means that more men farmers trusted the male agents more than women farmers did. The implication is that men farmers were closer to male agents than women farmers are. Also the study revealed that male agents felt more comfortable with men than with women farmers did. According to Heap (1977:117) "as members feel safe with each other, they spent less time in expressing feelings both positive and negative". Men farmers were therefore more likely to feel at home with the male agent, while women farmers dissipated their energies working on their feelings about their interaction which could inhibit male agent-women farmers' interaction.

Both men and women farmers discussed their personal problems with the female agent. This means that the female agent had close relationship with both men and women farmers. This is in line with Tetebo's (personal communication) observation that in Ghana, the female agent has no problem working with both men and women farmers.

Reciprocal Visits to extension agents. Persons attracted to one another seek each other out at other possible places of contact for a chance to be together. More men farmers visited the male agent than women farmers did. Few men and women farmers visited the female agent. Responding to what they would do given an

opportunity to visit the agents, most of the men and women farmers who had not been visiting them said, they would be willing to visit the male agent. However, more men than women farmers said they would be willing to visit the female agent. The men were therefore, in a position for the development of closer relationship with both male and female agents than the women farmers. Both men and women farmers were in a position for closer relationship with male than female agents.

Number of persons interacting. Interaction is closer between members in small groups than large groups. This is so because in large groups, members direct their communication at the leader but the leader's response is directed at the group and not at individuals as in the case of small groups as theorized by (Psathas, 1960 in Heap, 1977). The findings of the study, from the farmers' perspective showed that, both male and female agents operated in large groups with men and smaller groups with women farmers. Consequently, there would be impersonal interaction and weak relationship between agents men than women, which could result in a weaker agent-men farmers' interaction. Female agents operated more at the dyadic level or in small groups with women. They are therefore bound to have closer relationship with women than male agents do. As the number of people increases, active participants emerge who make more contributions than other members do. The contributions of active participants increase with increasing group size while the contributions of the passive and shy participants decrease because they are unable to express themselves in large groups (Hare, 1952 in Heap, 1976). During the group interviews on the field, it was observed that when mixed, the men spoke most of the time, they are therefore most likely to have a closer relationship with the male and female

agents than the women. It was also observed that the women spoke when they were addressed as a sub-group. Hare (1952) and Carter et al. (1951 in Heap 1977), comparing groups of five and twelve and four and eight respectively found that members felt freer to express themselves in smaller groups than larger groups.

Although small groups are more favourable for the development of relationship, large groups are more stable than small groups. The reason is that small groups exhibit low overt expression of conflict and higher negative feelings which is managed by avoidance and dissolution of the small groups particularly dyads (Heap, 1977). Bales and Borgatta (1952 in Heap 1977) in a study of discussion groups of two to seven, found out that, more tension was developed by dyads, they were relatively unstable and yet exhibited least conflict overtly. The study showed that the extension agents operated with women most often in small groups and at the dyadic level, therefore, relationship with women could disintegrate more readily than the relationship with men.

Composition of persons interacting. The inter-gender visits by agents to farmers more frequently took place in the presence of their spouses or other household members. According to the male extension agents in the study, women farmers co-operated in extension activities when their husbands approved of it, or when the male counterparts are involved in the activities. This is collaborated by Staudt's (1982) conclusion, in a study of discrimination in the provision of agricultural services to men and women farmers in Kenya, that agricultural services do not reach women

because of the "customary avoidance of interaction between trainers and women in the absence of male kin" (Staudt 1982:48-49).

In mixed groups comprising men and women, women do not usually speak, especially in the presence of the head of household or husbands. This is because they are shy and feel inferior in the presence of the men as found in the study. In such situations, most often, the exchanges tend to concentrate between the leader and the active participants of the group. There are more interactions between them, with the leader paying more attention to the active participants, to the neglect of the less active participants.

According to Robson (1966 in Heap, 1977), in triads consisting of two males and a female, the males compete for the attention of the female. Since men are dominant and compete for status and attention in the presence of the more submissive women the men turn out as the active participants. As a result, the mutual exchange takes place between the men and agents in mixed sex groups as observed by Shaw (1976) and Heap (1977). It is therefore more likely that male agents would develop a closer relationship with men (active participants) than women farmers would.

5.1.3 Activities

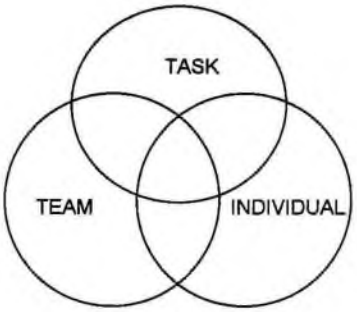
People engage in activities that are of interest, relevance and rewarding to them. According to "Heap (1977:123-24):

> Activities as distinct from discussions may have many purposes, they stimulate interaction for attaining improvement in members, and actualising problems and solutions that could not be expressed verbally, ... increase interpersonal familiarity and security.

Individuals' needs, tasks and group purposes interact as shown in Fig 2 below. An individual whose needs are satisfied in a group tends to have close relationship with other members of the group. Adair (1990:9) stated that:

> "If members of a group happen to get on extremely well together and find that they can work closely as a team, this will increase their work performance and also meet some important needs which individuals bring with them into the common life".

Fig. 4 Interaction of Needs



Adopted from Adair (1990).

In the study it was found that men engaged mostly in gender neutral activities with male agents. Female agents undertook some gender neutral as well as gender biased activities with men. All the activities were of interest to the men farmers. The male and female agents were therefore bound to do activities with the male agent.

The women's perspective from the study was that, they participated in fewer women biased activities with male agents. The male agents' perception was that the

activities they did with women were mostly women biased. The deduction from the two statements is that male agents and women farmers undertake few activities of interest, relevance and rewarding to women. This is because women, most often, singularly take decisions on the women biased activities that are of prime concern to them. Thus male agents did few gender-neutral activities of interest to women with most of the women. The male agent therefore has less opportunity for interaction with women to solve problems, increase familiarity, and improve interaction. It is however, possible for male agents to teach women biased, and conventionally male biased activities to women if they wish to do so This is exemplified by Gura's (1985:3) however, reports as follows:

> In an FAO-executed project in Zaire, emphasis was placed on working with women's groups to improve cassava and maize production. Traditionally, these food crops are 'women's crops' and male extensionists have not been trained in their production. In this case, male extension agents after undergoing intensive in-service training in their cultural practices and introduction of new varieties of the crops successfully reached women farmers (Gura 1985:4).

Secondly, "in Kenya an extension agent was interested in helping his women clients in nutrition matters" he was successful (Muzale and Leonard, 1982 in Gura 1985:4). Also, a male agent trained women in the use of tractors and spraying equipment in modern crop husbandry in Sri Lanka (Postel and Schrijvers, 1980 in Gura, 1985).

The inference from the discussion on activities so far is that more men farmers were involved in activities organised by both male and female agents than women farmers. Therefore, the opportunity for both male and female agent-farmer activities was oriented more towards men than women farmers. The activities of interest to women were conducted mostly by female agents and therefore female agents did more activities with women farmers than male agents. Female agents and women therefore had opportunities to solve problems improve interpersonal familiarity and increase interaction and therefore enter into a relationship.

Mutual exposure, interactions, sentiments and activities. According to Homans (1951) when individuals find themselves in one place, they inevitably interact with one another. The frequent interactions induce, in most people, friendship or liking for one another. One of Homans' hypothesis states that "if the frequency of interaction between two or more persons increases the degree of liking for one another will increase and vice versa" (Homans, 1951:112). The interaction, sentiment and activity spiral can be vicious when it is negative and beneficial when it is positive. As observed in the study, both male and female agents had more social contact, frequent visits and positive sentiments with more men than women farmers did. However, women farmers in certain contexts, had more positive sentiments with female than male agents.

Positive sentiments promote co-operation and more interactions that are expressed in activities. Repeated interactions result in the development of relationship. Positive sentiments are an indication of a close relationship while negative sentiments are an

indication of conflict, avoidance and weak relationship. Individuals who take relationships lightly attach little or no feeling towards their mutual interactions. They neither encourage an interaction nor discourage it. They become involved in little or no activities and therefore develop very weak or no relationship. The expression of sentiments in activities is exemplified in Takemura's study.

In 1993, Takemura studied the effect of interpersonal sentiment on helping behaviour among Japanese students. His findings were that "positive sentiment toward a target person increased the subjects' willingness to help, and negative sentiment toward a target person decreased the subjects' willingness to help". In the study agents had more interpersonal interaction with more men than women farmers did and consequently, their mutual sentiments and activities followed a similar pattern. Sentiments influence involvement in extension activities and the development of relationship, which in this study was skewed in favour of men as against women farmers.

5.1.4 Relationship

Heap (1977:127) stated that "it is a matter of common observation that people who have relationship with each other interact more than people who have not, whether the relationship is negative or positive" A potentially positive relationship, may be desirable or undesirable depending on the nature of the influence of the external system on it. These factors determine whether or not the relationship can be operative. Homans (1951:109) stated that:

> When a number of people have come together to form a group, their behaviour never holds to its first pattern. Social life is never wholly utilitarian: it

> elaborates itself, complicates itself, beyond the demands of the original situation. The elaboration brings changes in the motives of the individuals. ... the elaboration also means changes in their activities and interactions- changes, in fact, in the organization of the group as a whole.

In the study, it was found that both male and female agents had closer relationship with more men than women farmers did. As social workers, extension agents form relationships for the purpose of their change activities. In the view of Pincus and Minahan (1973:73) "a relationship can be thought of as an affective bond between the worker and other systems operating within a major posture or atmosphere of collaboration, bargaining or conflict". The perception of Bennel (1989) is that relationship between linkage groups can be categorised. In his categorisation he defined the possible types of relationships that can exist between extension agents and farmers to varying degrees as follows:

- co-operative-collaboration: when both the agent and farmers are strongly motivated to interact effectively;
- conflictual-engagement: if there are negative feelings and attitudes between them, associated with open confrontation;
- conflictual-avoidance: where the negative feelings and attitudes are associated with the agent and farmer avoiding interaction with each other; and
- indifference: where the motivation for interaction is none existent or insignificant.

An extension agent-farmer relationship with a potential for being close or weak may be modified by the extent to which it falls into the any of the categories listed above. The elaboration of a relationship into any of the categories listed above is influenced by the mode of interaction and the influence of the external system of the relationship. Among the categories of relationships listed, the co-operative-collaborative is the one that ensures positive relationship favourable for extension agent-farmer linkage. This linkage is expressed in participation in activities initiated

by either of them. Most often, in the case of extension in Ghana, the initiation of this participation is by a government official, the extension agent.

Context of interaction. The extension agent-farmer relationship, as deduced from the study, is voluntary characterised by collaboration and co-operation. According to Homans (1951) interaction and friendliness are associated positively if it is not influenced by authority. The agent farmer relationship, as seen in the study, was a superior subordinate type of interaction but one of volition, in which the farmer perceived rewards, therefore there was the potential for the development of positive relationship. The collaboration and co-operation of farmers are a pre-requisite for successful extension delivery. This "collaborative relationship with clients are facilitated by social work values that stress self determination and democratic decision making" (Pincus and Minahan, 1973:73).

5.2 External System

The external system or environment of the relationship comprising The farmers social system and extension organisation has certain characteristics that modify the intended relationship between male and female agents and men and women farmers.

5.2.1. The Farmers Social System

The farmers social system comprising, the mode of interaction, demographic, cultural, and social setting in which the relationship is experienced modifies the relationship in various ways. These factors influence relationship because, according

to Aronson, (1992), social influence act on people to comply with social expectations since compliance leads to gains or rewards and non compliance leads to punishment and to avoid punishment people would normally go for compliance. He further stated that:

> We do not behave in a particular way because such behaviour is intrinsically satisfying; rather we adopt a particular behaviour because it puts us in a satisfying relationship to the person or persons with whom we are identifying. (Aronson, 1992:34)

The implication is that much as farmers are aware of the relevance of extension services to them, the overt behaviour of responding to the extension agent and participation or non-participation in extension activities takes the issue of costs and rewards into consideration. Most often the subordinate individual go for compliance to avert punishment. In this study a woman farmer, who happened to be a wife or resident in the compound of a family head had little autonomy and so must comply with the general expectation.

The following characteristics of the society: gender, age, marital status, population density and settlement pattern influence who interacts with whom and the extent and context of interaction that may be acceptable. Access to land and land tenure system influences the ability to practise recommendations, the type, size, and the manner in which the operations are done. Ethnicity also influences the farmers' attitude to farming. The level of literacy and medium of communication have enhancing effect on the relationship. The socio-cultural factors of the people determine acceptable ways for achieving their purposes, and relating to one another. A mix of the influence of the factors shapes the agent-farmer relationship.

Gender and relationship. There are cultural and attitudinal practices that suggest that gender of the participants in an interaction influences their relationship. Among the Gas and the Dangmes of the Greater Accra Region, which include the study area, gender segregation is very important. This is exemplified by compartmentalisation of family houses into men and women's quarters (Personal experience of the researcher). Similarly, at family gatherings, men sit together; separate from the women to enable them confer and take decisions, which are considered to be male responsibility, like financial issues. The women aggregate together to consider women related activities, like cooking. It is therefore not normal to find men and women mixed together at meetings.

The general conception of the above ethnic groups is that men and women must aggregate by gender. 'A woman's friend is not a man but a fellow woman,' is a common statement. In Pellow (1977) work on women at Adabraka in Accra, she found out that, it is generally assumed that male-female relationships are not platonic. When a man and woman are seen together frequently, there is suspicion of intimate relations between them by onlookers. She further found out that the identity of the relationship between man and woman is sexual 'friendship' and marriage" The feeling about the relationship may be considered favourable or unfavourable depending on the age, marital status, and attitude towards the individual involved by onlookers. The participants involved in an interaction, aware of this situation tend to co-operate or avoid one another.

In the study male agents were observed to be avoiding interacting with women farmers, a similar observation was made by Staudt (1982) in Kenya. This context retards interaction between the male agent and women and hence their relationship. The female agents were however, able to interact and develop close relationships with both men and women farmers as found in this study.

Marital status and relationship. Married and betrothed women are always under observation by society as to how and with whom they interact to, particularly, men. Pellow (1977) found that women do not indulge in interactions that could possibly be construed as adulterous. They are sensitive to this situation. It was also revealed in this study that women felt more comfortable with female agents than male agents.

Farmers have more confidence and respect for married officials, who co-reside with their spouses within their communities than the unmarried ones. The married agents have easy access to both men and women farmers. The single agent or one whose wife does not co-reside with them is either suspected of going after women farmers and vice versa.

The relationship between male agents and jealous husbands and close relations of women farmers especially the married, single and betrothed as a result of the negative sentiment could range from conflictual avoidance to conflictual engagement which does not promote the establishment of a working relationship.

The study also showed that, in the company of male agents, women prefer to be among other farmers. Single female agents are also wary of the advances of married

men farmers and the attitude of their wives towards them. These inhibitions make inter-gender interaction between farmers and agents difficult and can precipitate conflictual avoidance or engagement.

Age and relationship. According to Shaw (1976), social contact increases with chronological age. The age of the individuals involved in the interaction influences their frequency and period of interaction. This could be attributed to their freedom from child-care, which bogs down younger women.

During the data collection, in this study, it was observed that male and female agents feel more comfortable with the elderly men and women, probably, because there is less suspicion of sexual relations between them. Male agents approached young women with caution. Both male and female agents run into the problem of either being suspected of having more than a working relationship with their farmers, to actually being involved in an affair with farmers. Potential suitors, fiancés and close relations often resist this situation. This hinders interaction between male agents and women farmers, and also men farmers who feel cheated by the male agent. These negative sentiments may either result in conflictual-engagement or avoidance.

The male and female agents' view was that young men and women were not serious about their farming activities. They were therefore not available for activities that could lead to interactions and culminate in the establishment of a cordial relationship.

Population, settlement pattern and relationship. In large populations, such as cities people do not care so much about what others do but in rural sparsely populated communities where people are known to one another, their actions and activities are everybody's business. Participants in an interaction are cautious and considerate about the perceptions that others have about their actions. The individuals involved in the interaction especially women, are sensitive to these perceptions, which they take into considerations in interactions, particularly when it is inter gender in nature.

The perception of agents in the study was that, there were more men than women farmers in the District. This is contrary to the surveyed data which gives the population of Dangme West District as composed of 51% women, 49% men (DPCU, 1996). This perception may be so because the agents come into contact with more men than women do, since it is men who receive them when they go visiting. The men receive agents because they are heads of households and have time to do so while the women do their household chores. Aronson (1992:14) observed that "how we evaluate and perceive an object is highly dependent on the nature of alternatives around it" and "the point of reference we use to make a comparison" This also explains why agents have more men contact farmers than women.

The potential for the establishment of a relationship is more favourable between both male and female agents and men than women farmers. The potential for female agent women farmer relationship is also more favourable than male agent women relationship.

Contact farmers and relationship. Under the T&V extension approach of Benor and Baxter (1984) practised in Ghana, extension agents are expected to work with a number of farmers in groups irrespective of gender. The study showed that most of the male and female agents had more men than women contact farmers (Donkoh, 1996). Keller's (1985) account of the practice of the T&V system of extension in Kenya was that none of the extension workers identified a female contact farmer. The study showed that male and female agents work with farmers who made themselves available for their service. More men than women made themselves available, because the women had constraints of time, workload and socio-cultural status.

The agents are expected to form farm location based contact groups to work with farm households or farm families Benor and Baxter (1984). Women's farms are scattered among men's farms and as seen in the findings of this study, women also work on the family farms with men. The concept that a member of the household or farm family represents the household sets in, the household head represents the household and becomes a member of the group and hence a contact farmer. The man represent the family because extension male agents consider women as farmers wives (FAO, 1993). Women are therefore restricted by the circumstances in their interaction with male agents.

The poor representation of women as contact farmers may be attributed to constraints such as work overload, which comes about as a result of their farming activities, household chores and non farming activities like income generating activities. Although they claim they make time for all activities in the study, the time

could be inadequate as compared to men who have more leisure time and so avail themselves for interaction with extension agents. That men have more leisure time than women in Ghana has been found by Haleegoah, (1991). The inability of most women farmers to make themselves available for extension activities makes the establishment of relationship with male and female agents more difficult than men farmers who avail themselves of the services and activities. Also "women are less likely to be selected as contact farmers because of their resource constraints FAO (1993).

Ethnicity and relationship. The expectation was that, there would be the tendency for natives to feel complacent and relaxed about their farming activities while strangers, with the intention of seeking property, to go home with tend to embrace ideas that would help them to earn or gain more. In such circumstances, both men and women go all out to embrace the means of production. They care less about the attitude of others in their choice of achieving their aims. The findings of the study were contrary to this expectation.

Literacy and relationship. The level of literacy of the farmer influences the rate at which he seeks and understands information. The agent finds it easy relating to the literate because teaching them could be less difficult. However, semi educated people, who feel they are knowledgeable can make teaching more difficult than illiterate. The study showed that most of the women were illiterate while most of the men were literate. More of the men had education beyond primary level than the women. According to the DPCU (1996) the highest educational attainment of the

populace is mostly at the primary school level. The agents indicated that it was easier teaching men than women were and that more men sought information than women did by visiting agents.

The findings that men farmers tend to be more educated than women, is collaborated by the Ghana Living Standard Survey of 1991 when the literacy level of women in Ghana was given as 61.5% by the survey. In the study, the agents view is that, illiterate farmers, mostly women, are unable to read and understand printed instructions, and require more effort and teaching aids to impart technology to them which the extension agents do not use. The women also have a self-esteem problem of feeling shy.

The low literacy level of women hinders their interaction with the agents more than men because most of them are unable to read and understand printed materials and the agents do not have or produce visual aids for teaching. The women also feel shy and inferior, particularly, in the presence of the male agent.

Formal training in agriculture and relationship. As shown in this study, few farmers receive formal training in Agriculture. Men dominate the few unless the training programme is specifically targeted at women as in the case of demonstration homes for women operated by WIAD. The low women's participation in training, is collaborated by Asante (1977), who found out that, out of 183 farmers who enrolled for a course in Kwabre District in Ashanti region only seven were women. Women are unable to participate in formal training in agriculture and at workshops because they have many constraints.

Some of the constraints women face, which hinder their involvement in training and workshops are illiteracy and poverty. Workshops and seminars are usually conducted is English, and involve travelling away from home. It is also compounded by the need to provide for family needs, that is the provision of adequate resources prior to leaving home (Haleegoah, 1991). However because women farmers organise their lives on day to day basis, it becomes difficult for them to make such provision before leaving home. Men farmers are therefore predisposed to collaboration and co-operation while the women even if they would like to participate in a workshop are unable to attend. It is however possible to train women farmers if they are targeted as shown by their participation in training at WIAD demonstration homes and rice production at Ashaiman by JICA (Sato 1996).

In this study all the agents were trained agriculturist. The female agents were mostly specialists in Home economics at Diploma level. The presence of the highly trained female agents is contrary to the notion that female agents are poorly trained (Walker, 1990). The male agents had been trained in general agriculture and had before the inception of NAEP in 1992, had in-service training in general agriculture. Most of the female agents had their in-service training in home economics. With the inception of NAEP in 1992, the male agent is expected to teach women farmers agricultural production and women related activities with the support of in-service training by WIAD. The female agent also has to teach farmers men biased and gender neutral activities. The pre-service training of extension agents at the Colleges of Agriculture exposes both male and female students to gender neutral activities, like crop and

livestock production. Additionally, female students as opposed to their male counterparts are exposed to home economics. This may account for the ability of female agents to do gender neutral and men biased activities with farmers while the male lack interest in women biased activities. Male agents are therefore not disposed to doing women biased activities. The female agent is however, able to teach both men and women, she therefore easily enters into a relationship with both men and women farmers.

Land and relationship. Land is a major requirement to the practice of what extension agents teach and recommend. Farmers with access to land, usually men, (Brown 1994) by ownership or in agreement with land owners are more likely to develop a positive relationship with the agent.

There is the tendency for large scale, progressive farmers to have more interest in technology and be drawn to agents (Roling, 1988). Men tend to have larger holdings than women do and therefore are more inclined to have access and develop a relationship with the agent. Farmers who own land are motivated to plant tree crops and cultivate whatever they desire, knowing that the produce belong to them. Some of the farmers, as found in the study, under share cropping and rental tenure arrangements believe that they will gain more after paying their land lords, should they accept technology that would lead to increase in yield.

Access to land is one of the constraints to women's participation in extension activities (Duncan 1997). According to Brown (1994), in Ghana land is traditionally owned by the community and belong to lineage, however, the status of men as

heads of families empowers them to control and monopolise this land. They technically obtain ownership rights over the land and as a result restrict women's access to land (Ardayfio-Schandorf, 1996). A similar report was made by Afonja (1986) in Yorubaland in Nigeria

The findings of the study also showed that most of the women had small sized farms and fewer fields than the men had. This is collaborated by the DCPU (1996). The sizes and number of fields owned by women were small and few. This may be attributed to lack of resources for the cultivation of larger farms.

The inability to fund larger fields and obtain farm inputs is not a new phenomenon. Women are not motivated to work towards higher productivity, because they are used to low productivity (Tamakloe, 1978). The extension agent works with farmers who make themselves available. Men who manage them with a profit motive own the larger size and number of fields. They therefore seek and avail themselves with the service and thus co-operate with the agent, presenting themselves in conditions favourable for interactions and the establishment of relationship.

Socio-cultural factors and relationship. Men are usually heads of house holds (Gura, 1984 and Spring, 1985). They are accorded the opportunity of first access to all entrees including information into the household and community. They overtly or covertly decide what should be passed on and what should not go into households and communities. The findings in the study, which was collaborated by Whitehead (1994) was that some of the farms were managed by women household heads singularly or co-managed with their husbands. When information is directed at male

household heads, female headed households and wives of farmers are deprived of it. Women are thus denied the information and the opportunity to make their own informed decisions. Women have accepted and observe this practice although it deprives them the opportunity of access to facilities, including those meant for them.

Men's permission is required for certain decisions to be taken, including participating in extension activities and attending courses and workshops as found in the study. This permission men grant, taking their interest into consideration. The study also revealed that, some men farmers although they were aware of the benefits their wives derived from their interaction with the male agent said they would not allow the agent to visit the farms of their wives with the women alone. Some said they take the agent along to their wives farms. This prevents direct male agent-woman farmer interaction because in the presence of the man the woman does not do the talking, he does it. A similar finding was made by Pellow (1977) who observed that women in mixed company rarely talk. Men often speak for them; this is viewed by both sexes as male's role. This is collaborated by West, (1984) observation that men interrupt women much more often than women do in a variety of situations. West (1984) reported an exploratory study on interruptions between physicians and patients, which showed that the male physicians interrupted patients disproportionately. While female physician, is interrupted as much more by patients in a manner that seems to subvert her authority.

The social status of men as heads of households gives them the opportunity to interact with extension agents. The study showed that women liked the extension

agents visits to their husbands. They perceive the agent as a visitor to their husbands or household heads (men), it is therefore men who meet and interact with the agents. When women decide to respond to these visits, they are faced with distraction by children, husband and household chores. Men have less distractive problems since children are quickly dismissed to go to their mothers with their problems. Men also summon mothers to see to whatever they perceive is disorder while they receive attention of the agent.

Gender roles and responsibilities and relationship. Traditionally, women have multiple roles and responsibilities. A study by Haleegoah in 1993, showed that, the Ghanaian woman farmer is fully occupied. The only time she is not working is when she is sleeping. While the man has time for leisure (in the evening) when he returns from the farm. On the farm, in addition to farm operations the woman goes in search of food and firewood. She prepares food for lunch and goes in search for food and firewood for the evening meal and for breakfast the following morning. The findings of this study showed that women may own farms or farm with their husbands on the same field but without any motivation they may not be able to avail themselves with the services of the agent. This is because they have other responsibilities like searching for food, firewood and other items they may require to take home at the end of the day. They may as a result neither have interactions, nor participate in activities with the agent, that could otherwise lead to the development of sentiment and ultimately a relationship. Men on the other hand are free on the farm and at home to have discussions on their activities with the agents, The men as a result interact and develop relationships with the agent.

Socio-economic factors. The study revealed that some men object to the male agents interacting with their wives because they feel the economic circumstances of the women would improve. Since higher economic status of individual correlates with social status and authority, irrespective of gender, the husbands feel a change in their wives' status would erode their authority over them.

The findings showed that, women's co-operation with extension agents is enhanced by the inclusion of income generating activities loans and inputs. These they consider as being beneficial to them. Men also require loans and inputs for their activities. These facilities assist in their performance on the farming activities. Because men desire to dominate their wives, when they receive information on loans, inputs and income generating activities they would not inform their wives. They tend to block their wives' access to the facilities that could make women rich and as a result have power, men are therefore hostile to agents who come to work with their wives (Personal experience). This attitude of men inhibits the interaction of women with male and female extension agents.

Nature of activity and relationship. Traditionally, men and women in Dangme West District grow the same crops. While men produce of these items for cash, the women's produce for subsistence. The men regard their activities as business, the women most often do not think about their farming activities as such. Carney and Watts (1990) made a similar observation in the Gambia. If they sell any of their produce, the proceeds are used to fund the provision of immediate needs of the household. More men farmers therefore seek technology and feel obliged to practise

it to increase yield while most of the women are satisfied with what they are able to obtain as found by Tamakloe (1978). More men are therefore attracted to the extension agent than women are and hence men have the tendency to establish relationship with the agents than the women do.

Women's activities are delayed by their reliance on men for land preparation men this is because they attend to the women's farms after they had completed working on theirs. This was observed by Muchena in 1989 in Zimbabwe, Hoking (1991) in Zambia and Seinfert (1993) in Ghana. They therefore lag behind the appropriate period for scheduled activities. This could be a reason why an agent would not be attracted to her to interact with her.

Culturally, men are expected to perform 'men's tasks' and women, 'women's tasks'. It therefore appears odd to male agents to find themselves teaching women how to perform tasks such as home management, childcare, and nutrition which are considered women's tasks. The women also find it awkward presenting themselves to be taught by male agents. Fiadjoe et al. (1997) found out that male agents and their supervisors consider women related activities as the duty of female agents. Their reason is that it is not culturally acceptable for them to do the activities. Since activities lead to interaction and male agents are reluctant to perform women related activities that would not be usurped by men; the opportunity for mutual exposure for interaction is lost. However, Gura (1985) reported that women biased activities have been successfully conducted by male agents with women in Kenya and Sri Lanka

successfully by Postel and Schrivers (1980) and Muzale and Leonard (1982) respectively. The explanation for their success was that:

> the women were strongly organised and the District Administrative Officers and extension supervisors recognised the women as appropriate client for extension assistance. Training and orientation were the factors and not the gender of the agent (Gura, 1985:4).

Socially and culturally, therefore male agents interact easily with men but their interactions with women are hindered by the attitudes of the male agent, the society, and the women themselves. These limitations are not backed by social sanctions but prejudice and are attitudinal. Women farmers therefore end up with limited interaction with the male agent and consequently develop poor relationship with them. The female agent however, is less inhibited and therefore is able to interact with men and have relatively better interaction with women farmers than male agents do, for the establishment of relationship with them. The female agent population is however very low for example, the FLS composition of DAES in Dangme West District, at the time of the study, was (82.4%) males and (17.6%) females. This is the general trend in the country and therefore, much as female agents have relatively better interaction with women farmers, reliance on them for extension delivery to women would not give women's access to extension services as was the case of WFE before NAEP.

5.2.2 Influence of the DAES on Agent Farmers Relationship. .

The agent-farmer relationship is influenced by factors such as the characteristics of the agent and the organisational policies and strategies that have bearing on them. These are discussed below.

Characteristics of the agent and relationship. The male and female agents' characteristics that elaborate their relationship with, men and women farmers are associated with their knowledge, attitude and propinquity. Also the mode of communication, the perception and meaning derived from the communication by farmers and the success of the communication has effect on them.

The study revealed that, both male and female the agents were well educated while the farmers, particularly the women were poorly educated. van den Ban and Mbakwa (1997) in a case study of participatory and demand driven T&V extension system in Tanzania made a similar observation. They observed that the big differences in educational levels between the agents and farmers gives the agent more possibilities and confidence to help the farmers in their villages. The farmers also had confidence in the agents, which was also the case in this study.

There is more interaction between agents and farmers, if the agents live among them, than when the agent just visits once in a while. The agent is looked upon as a leader and farmers visit his/her home at their convenience to discuss issues Maunder (1973). Reporting on the use of male technicians for the provision of extension services to women in an Islamic state of Yemen, where inter-gender interaction is limited by law, Hamada (1985) stated that, living within the operational area increased the technicians' familiarity with the area, the people, their cultural and political environment. The male agents became known and were accepted by the people. Living among the farmers, therefore, increases the agent-farmer level of

contact, interaction that builds their relationship, if the attitude exhibited by the agent towards the farmers and their work is acceptable and acknowledged by the farmers. If the contrary is the case, there is general resistance and avoidance of the male or female agent by both men and women farmer. This scenario was indicated in the reasons that enhance or retard interaction with the agent in this study.

Agents who live away from their farmers are not usually available for frequent interaction at their convenience. The farmers are unable to visit them, because they may never know the agents' residence or it may be too far from the farmers' village as seen in the study. If farmers desire to visit an agent who does not live close by, they require time and money and in the case of women the permission from their husbands to do so. This permission may not be granted, if the agent is male. Pellow (1977) observed that a husband who mistreats his wife worries if another man comes along since the outcome of their interaction might not be to his benefit. Additionally, women do not have the money, time and freedom to travel. Women are therefore disadvantaged in this respect.

The findings of the study also revealed that most of the agents; particularly the females resided outside their operational areas, because they were married. The farmers could neither visit them because they did not know their residences nor have assess to them at their convenience as opposed to the agents who reside in their operational areas. Agents who do not reside within their operational areas are unavailable for work beyond the normal working hours. This reduces their

opportunity for interaction and establishment of relationship with farmers; particularly the time constrained women farmers.

Relationship is essentially communication between individuals. It may be verbal or non-verbal. The fidelity of non-verbal communication or gestures is low because different meanings can be ascribed to the same gesture. According to Scheflen (1974) preening behaviour like rearranging clothes, combing or stroking ones' hair and glancing in a mirror are indicative of sexual feelings. If people of the opposite sex stand close (within the intimate or personal zone of 45cm or 45-20cm respectively) together intimate relationship is suspected and partners of the participants become jealous (Zastrow and Kirst-Ashman, 1990). There is therefore the need for gestures to be accompanied by verbal communication for clarity.

The attitude, knowledge, and propinquity influence the development of agent farmer relationship positively. The social characteristics of agent-farmer have the tendency of being gender sensitive. The sensitivity was found to be based mainly on the suspicion of intimate relationship than the ability to perform assigned roles.

The Organizational Policy and Strategy to Reach the Various Categories of Farmers. The organisational system of the DAES influences the agent-farmers' relationship through its policies, associated strategies, which are communicated to and understood by the front-line agents. In gender relations, gender sensitisation exhibited in programmes, reporting systems, and evaluations are necessary.

The DAES, although it has a policy to reach women farmers (NAEP, 1992), has either not developed programmes, communicated strategies to the agents or the agents have not understood the policies, programmes and strategies that would facilitate its achievement as stated by Boone (1985). As observed in the study, the agent to equate gender issues with soya bean cultivation and utilisation. The explanation for this perception may be attributed to the operations of WIAD in its women specific programme of diet improvement by soya bean production and utilisation.

WIAD the subject matter department that should be providing training to FLS in women specific activities is woefully understaffed. "The headquarters of the Department consist of six units and seven staff members" (JICA, 1993). The situation has still not improved.

The extension agents are not gender sensitive in their operations. They work with farmers who are able to avail themselves for the service and those who are ready to listen and practise what they are taught. This may be attributed to their desire to have information to complete their Management Information System (MIS) forms and something to show to their supervisor when they visit. The operations of the service are not client driven, although the management perceives it as such. The activities initiated by the agents are more of technology transfer and not client demand driven. This kind of approach to extension reaches progressive farmers who are aware of the benefits of the technologies being transferred. They make provision for means and time to participate in their activities. Farmers' participation in programme

development is minimal. Collaboratively identified problems could have led to the development of appropriate programmes that would reach the various categories of farmers (Boone 1985, Natpracha and Williams 1985 and Walker, 1990). Women even where they are aware of the benefits of participating in extension activities do not participate because they are not motivated to do so.

The attitude of the extension agent from this and other studies indicates that extension agents are not motivated to seek and work with women. Measures, which could motivate this attitude, are gender sensitisation; client-centred programme development based on situational analysis. The reporting format for agents that provides inputs for the Management Information System MIS is neither gender segregated nor client based programming sensitive. The report is gender neutral and so the agents are not compelled or motivated to specifically seek the women's participation.

Agents are not appraised based on the processes that precede technology transfer, the situation analysis to delineate clients. Agents' appraisal is based on the number of training sessions attended, visits made, demonstrations conducted, number of farmers co-operating and adopting technology (Appendix1). These indicators do not include time spent on the social aspect of the work; information gathering, programme and the processes of getting farmers participate in extension activities. The result is that the same contact farmers are used for several years.

5.3 Participation

The level of participation in activities with both male and female agents was skewed towards men farmers (Liuma, 1989). This is in line with Boserup's (1970) observation that men are taught modern techniques while women continue to use traditional methods in their farming activities. This may be attributed to a number of causes which include the nature of extension activity, agents' preference for progressive farmers (Roling, 1990) and the relative socio-economic and socio-cultural status of the men and women farmers.

The nature of activity. The activities agents carry out with men and women farmers include demonstrations and production of crops, livestock, post harvest management of produce and women specific or WIAD activities.

The results of the study showed that more men farmers partook in activities for crop and livestock production conducted by the both male and female agents than women farmers did. These are activities of interest to men. Participation in post harvest management of crops, like drying of pepper and maize for storage had a weak relationship with gender because both men and women do it. Men participate in these activities because they are at the point of storage, use or sale. They to exercise monitoring and control because they are interested in the proceeds.

More women however participate more in WIAD activities, which are women, related. WIAD activities are therefore of interest to more women than men who perceive it as women's activities. Participation in Farmers day celebrations, which is a social activity, showed no relationship with gender (GGDR). Experience with this

celebration in Dangme West District over the period of 1990-1994 shows that in no year did the proportion of women among the award winners exceeded twenty percent. (Personal experience of the researcher). In this case the men received the honours while the women sang the praises although most of the award winners are selected from couple managed farms.

Preference for the progressive farmer. The extension agent in the bid to get the work done works with farmers who are available. Progressive, commercial and educated farmers who are mostly men avail themselves of the service (Roling, 1990)

The Relative socio-economic and socio-cultural status of men and women farmers and participation in extension activities. The study showed that more men participated in demonstrations and extension activities involving the supply of inputs. These inputs as in the case of ETP, and FPP, for maize and cowpea production were supplied as recoverable credit. Women are constrained in taking loans for the reasons that follow. According to Arhin (1978, in Brown 1994), traditionally, women's debt is the collective responsibility of the family or husband, they could therefore be prevented from taking loans from the banks. Additionally formal credit programmes are directed at heads of households (Andah, 1978 and Alhassan, 1996). Women are therefore disadvantaged in the access to this form of credit, which motivates farmers to participate in extension activities.

The inputs for VDP for soya production were a non-recoverable credit provided by the Sasakawa Global 2000 in collaboration with DAES and WIAD. Trials are farmer managed demonstrations with inputs from Crops Research Institute and under the

supervision of extension agents. Men, as heads of families are the first people, agents' contact when they visit the household. They therefore, receive the necessary information about these inputs and take decisions whether or not to participate in the programme. Invariably, without consulting or informing the wife or other women in the household they decide on being the beneficiaries. Even if he does they would not question why he should receive the inputs and not them.

According to Zetterberg's (1966:131) Strata-Prestige-Postulate and Theorem Strata Motivation: "The higher the strata a person belongs to, the more favourable the evaluations he is likely to receive from his associates" and "Persons are likely to engage in those actions within their repertoire of actions that maintain them in their strata" (Zetterberg, 1966:133) respectively. Therefore the men as the head of household monopolises resources such as inputs provided because resources are associated with power and status. More resources mean higher prestige. To maintain his status, the household head appropriates inputs coming to the household, which are used on his farm to increase his holdings and output.

More men therefore participated in both male and female agents managed programmes than women farmers. Where the participation of women is high, it has to do with women related activities or social events.

5.4 Participation and Relationship

The study revealed that irrespective of the strength of relationship between agents and farmers, more men participated highly in activities of male and female agents than women did. However, it was found that, participation in more activities with the

male agents, women and men farmers had equally close relationship. At higher levels of participation in activities with female agents, women were found to have a closer relationship with them than men farmers. This is in line with Homans (1951) and Heap (1977) observation that participating together in an activity can lead to an interaction and development of sentiments and ultimately a relationship. It is therefore likely that when activities between male agents and women farmers increase, the relationship between them could be closer.

CHAPTER 6

CONCLUSION

6.0 Introduction

This study was aimed at finding the influence of gender relations on extension delivery. From the findings and discussions in the preceding chapters the following conclusions are drawn.

This study has shown that the gender relations between extension agents and farmers influence extension delivery and especially, the type of relationship that exist between the agents and farmers, particularly, women farmers. The relationship between agents and farmers is composed of interactions, sentiments and activities; the establishment of this relationship culminates in participation in extension activities. Relationship as a social construct, is influenced by factors in the characteristics of the participants, social system in which it takes place and the background of the participants.

6.1 The Internal System

Interaction - Mutual exposure. Men and women farmers had equal physical contact with the male agents but men had more social contact with the agents than women farmers. With the female agents, women had more physical contact than men did. However, more of the men who had physical contact with her had more social contact with her than the women who had physical contact with her.

Proximity is important for the establishment of relationship, however, physical contact alone does not lead to the establishment of relationship. This is so because

physically close people do not always engage in social interaction. Social interaction is required in a relationship between extension agents and farmers. Male and female extension agents therefore tend to have more social interaction with men than with women farmers. This has implication for extension delivery with respect to the concept of equity by gender.

Frequency of interaction. Both male and female agents visited more men farmers more frequently than women farmers. The male agents made more frequent visits to more wives of the men they visited while the female agent visited more frequently, spouses of the women they visited. The male bias of the higher frequency of visits to men was attributed to the status of the men as receptionist of visitors due to his higher social status. Women could not make themselves available when agents visited because they were constrained by their subordinate social status, time and indifference to being involved in extension activities.

Frequent interaction is a prerequisite for interaction but women are less able to get into this situation with extension agents. This situation would make women to be less likely to have a close relationship for effective extension delivery.

Duration of interaction. The period spent by male agents with men and women farmers were found to be equal. However, the female agents' view was that they spent more time with men than women farmers because children, husbands and household chores distract women. The period of time spent was essentially based on the activity on hand, the ability of farmers to make themselves available.

Although the period spent is equal with men and women farmers, women are distracted by other commitments, therefore the effective time spent with women is less than he would have spent with men. The male agent is also worried about being suspected of having intimate relationship with the women; he may therefore be in a hurry to rush to leave. The quality of interaction would be less favourable with women than men with whom they interact in a comfortable environment. This does not augur well for the development of positive sentiments required to establish a relationship since.

Sentiments.

Feeling of liking. All the farmers said they liked the extension agents' visits and that they were indifferent to the gender of the agent making the visits. The men and women like the visits because of the desire to learn. Some male agents like visiting men because they felt at ease in their company. Some of the male agents and all the female agents like visiting both men and women farmers because they are scheduled do so. This condition is favourable for social interaction and the establishment of relationship for extension delivery.

Reciprocal Visits. More men than women farmers do reciprocal visits to male agents for guidance. Both men and women farmers who did not visit the male agent could not do so because they did not know their residence. Also the reciprocal visits by both men and women farmers to female agents was very low because they did not know their residence. The men who were not visiting the agents said given the opportunity they would visit the female agents for guidance. However, the women

said they would not visit the female agent because there was little interaction between them.

Farmers are aware that visiting the agent is rewarding but they are unable to do so because there is minimal interaction between them and the female agent. Also most of the female agents are not accessible to farmers because they live outside their operational areas. People who engage in rewarding interactions are motivated to seek each other out at other possible places for more interactions. More interactions lead to the establishment of relationship. Reciprocal visits therefore are important in the establishment of relationship while proximity enhances reciprocal visit. Women are therefore, less likely to establish close relationship with both the male and female agents than men.

Number involved in interactions. Both male female agents interacted in large groups with farmers because according to the farmers, it would facilitate access of all farmers to what the agent has to teach. The male agents however, said they met both men and women farmers individually and in large groups at the convenience of farmers. Female agents operated with men in the company of their wives to avoid suspicion and with women they met them on individual basis for privacy and to teach contact farmers what to pass on which is commendable. Most of the farmers interviewed met the agents in mixed groups.

In large groups the agent would not be able to pay attention to all group members his attention is focused on the active members who happen to be men most of the time. In mixed groups, men act as spokesmen and so the interaction would be

between men and the agents. Since direct interaction is important for interpersonal perception and adjustments of sentiments to one another needed for the establishment of relationship, men are more likely to establish close relationship with farmers.

Activities. Male and female agents conducted more gender-neutral activities. These were activities relevant to all farmers, however, since men are the ones contacted by the extension agents by virtue of their status as household heads, more of them have access for the interaction than women farmers. Female agents, however, conducted more women biased activities and involved women in their activities more than male agents did. The male agents felt women biased activities should not be handled by them and as a result, they had no interest in these activities claiming that it was culturally unacceptable. Since male agents are not interested in women biased activities and gender neutral activities are targeted at men because of their relatively higher social status, women would not be motivated to engage in activities with male agents. Activities promote interaction and since the women do not engage in activities with the male agent they would tend to have less interaction.

Relationship. The relationship between male and female agents was found to be closer with men than women farmers. This implies that both male and female agents interact more with men than women farmers and therefore contact more men than women farmers. Both male and female agents would therefore have less social interaction with the women than men would.

6.2 The External System

Farmers socio-cultural system. Unequal assess to the factors that enhance extension agent farmer relationship was observed. Most of the men farmers did their farming with their wives however fifty-three per cent of the women farmers owned personal farms. Women are involved in farming both on their own and with their husbands, but have minimal interaction with the agents. This is because male and female agents contact household heads, which happens in most cases to be men. Also male agents are not interested in doing women specific activities and women are not motivated to participate in the activities male agents do. There is therefore minimal social interaction between women and the male and female agent.

The women farmers were mostly illiterates; they do not attending workshops and training that were gender neutral but attend women biased training. Literate farmers can have access to many other sources of agricultural information and make them appreciate extension messages making it easier for agents to teach them. Principles have to be brought to the level of illiterate farmers, for them to have interest and appreciate what they are taught during visits. Extension agents are more likely to enjoy interacting with literate men than illiterate women are. This situation promotes interaction between male agents and men farmers more than women farmers.

The perception of the agents is that there are more men than women farmers in the district. The population in the District is however, 51% women and 49% men and almost all the women farm either on their own or with their spouses. This was given as one of the reasons why agents visit more men than women farmers. This

perception of higher men population would tend to cloud the agent's judgement as to his coverage and perpetrate the low agent women farmers' interaction.

Most of the villages where agents work are primary societies with clustered homes and isolated farms. People in primary societies tend to involve themselves in personal issues of others, which affect inter-gender interaction since frequent association between men and women are misconstrued as intimate relationship. Also, since the farms are isolated, it would mean the male agent would be alone with the woman in secluded areas, which could also be misconstrued and arouse suspicion of intimate relationship with him. The male agents therefore shy away from women farmers. Husbands rather than allow their wives' to receive agents on farm visits, go to the wives' farms to receive the agent, blocking direct interaction between male agent and women farmers, and therefore the opportunity for social interaction that could lead to the establishment of a warming relationship.

The DAES is operating a gender-neutral system, which in practice means men biased. The agents are not under any obligation to seek and work with women farmers. Their performance rating is not gender based, therefore there is no motivation to make a deliberate effort at reaching women farmers. They are not gender sensitized and do not know what gender issues are about. They equate gender issues to soya cultivation and utilization.

The men biased relationship and participation in extension activities of male and female agents are related to the agents and farmers' knowledge and attitude rather than gender per se.

6.3 Participation

More men participated in activities conducted by both the male and the female agents than women farmers did. This was so in all activities except WIAD in which the women's participation exceeded that of the men. Their level of participation in Farmers Day Celebration, which is a social activity, was equal.

6.4 Participation and Relationship

At both weak and close levels of relationship between agents and farmers, more men farmers participated more in activities conducted by both male and female agents than women did. At nil and low levels of participation more men had closer relationship with both the male and female agents than women had. At high level of participation in extension activities, more women had closer relationship with both male and female agents than men did. The participation of men farmers in extension activities did not necessarily follow the closeness of relationship between them and both male and female agents.

The intensity of relationship and level of participation in extension activities were found to have the influence of the elaborating effects of factors in the external system, that is, the larger society on them. Therefore, much as both men and women farmers were aware that extension services were beneficial, to the same extent, more men were able to avail themselves of the services than women.

CHAPTER 7

RECOMMENDATIONS

In this chapter, recommendations on how to reach all categories of farmers particularly women, based on the findings, discussions and conclusions of this study are made. The recommendations focus on the need to improve interaction between extension agents and farmers particularly, women farmers. It dwells on the need to improve agent-farmer mutual contact, frequency of interaction, sentiments, and activities in order to facilitate extension delivery to all categories of farmers. The study revealed that this would be possible by changing the attitude of all participants in extension delivery through training, gender sensitization, and the development of appropriate client centred strategies and programmes. The use of appropriate strategies in the implementation, monitoring and evaluation of such programmes is recommended.

To change the attitude of the participants in extension delivery requires knowledge on the role of gender and gender relations in human relationships. It also requires appropriate skills to gain access to the various categories of farmers based on gender and resourcefulness. This approach should start from pre-service training. The pre-service training of extension agents should expose both male and female agents to all subject areas that they are likely to handle in the field. This is because attitudes are formed from knowledge and skills, which are normally acquired during the pre-service training period. If agents were equipped with such skills before entering the service, they would be in a position to practise extension delivery to reach both men and women farmers.

All those involved in agricultural extension; management, agents and farmers should be exposed and sensitized on the concept of gender in agriculture through in-service training. This would facilitate their appreciation of the need for collaborative development of appropriate policies and their translation into comprehensible strategies that can be implemented to reach both men and women farmers equitably.

Extension supervisors should be sensitized on the need and possibility of male agents doing activities with both men and women farmers' accessibility of extension to women. All farmers, men and women, should be sensitized on the need for agents to meet both men and women farmers for teaching purposes. The propagation of such information should start at the management level by mass communication, to reduce suspicion and give legitimacy to field agents at the village level to interact with women farmers.

Strategies developed, particularly by management to improve extension delivery to all categories of farmers, must be communicated to and understood by the front-line agents as suggested by Boone (1985), in order to have a common organizational understanding of what is expected. Location specific strategies must be based on thorough situational analysis to ensure that extension packages are designed to take care of different farmers (both men and women) in the social setting. It would also be beneficial to include client group analysis in such studies to ensure that all categories of farmers are appropriately covered in the programmes. Participatory

methodologies should be employed in designing extension programmes, to ensure the commitment of all participants, men and women alike.

Both men and women farmers must be encouraged to seek agents at contact points on visiting days and at the District office on meeting days for assistance and information. They may also visit them at their residences if they are not far from the operational areas in the company of other farmers. Female agent should operate in communities where their husbands live to ensure that farmers have access to them after working hours, if need be, for the necessary interaction.

Women need to be encouraged to make themselves available for extension services since they are not motivated on their own to do so inspite of their awareness that the agents can help them increase their productivity and home management skills. This would increase the interaction between extension agents and women farmers.

Agents' schedule for visits should be designed to ensure equitable frequency of visit to men and women farmers. As intra-gender frequent visits promote the interaction of spouses of those visited, extension could explore, the possibility of male agents access to women farmers through their husbands and vice versa.

Extension agents need to plan their programmes for women farmers based on the amount of time they can afford without distraction. Also the co-operation of their husbands or heads of households should be sought to ensure that useful interaction between the women and agents take place during the time they spend together.

Extension needs to find a way of reducing the feeling of insecurity as a result of suspicion of intimate relationship between male agents and women farmer to facilitate intragender interaction. This could be done by ensuring that agents working with women farmers do not invade their social distance, involving male kin or other household members in activities with women farmers and working with them at open places. There is also the need to undertake activities, which are of interest to women farmers and respond to their needs to raise their confidence in the agents.

The T and V approach to extension delivery being practised should be modified to ensure targeting of the various categories of farmers. Allocation of inputs, credit and number of contact farmers should be based on the client categories. To facilitate interaction between extension agents and women farmers

Extension agents should be made to seek and encourage women to participate and be involved in the implementation of extension programmes. The agents should be equipped with useful messages for all categories of farmers. They should be trained in the use of appropriate extension methods and teaching aids, and provided with appropriate teaching aids for teaching to reach the various categories of farmers particularly women to increase their chances of interaction for the development of stable relationship.

The use of female information brokers like wives of extension agents, female village officials and older village women to organise women to meet male extension agent regularly, could be helpful. Men contact farmers could be asked to invite their wives

and women kin to receive the agents with them during home and farm visits. These wives and women kin of contact farmers in should be included in all extension programmes.

More women should be involved in activities to increase their interaction with the agents and improve their access to extension services by allocating a certain number of places to women as done in Malawi where 50% of the places in training are allocated to women farmers (Gura, 1985)

The 'Front Line Staff Daily Log,' which forms the basis for inputs for the MIS should be modified. All inputs for the MIS must be segregated, analysed and evaluated by gender. This would facilitate the appreciation of the need for extension delivery to men and women farmers by male and female extension agents and their involvement in extension activities. If this were done it would go a long way to help management in the appraisal of the policy of reaching women farmers and taking care of the gender factor. It would encourage agents to interact with women farmers for the development of a stable relationship for extension delivery.

Evaluation of agents' performance should include gender-related impacts and stages of programme development and implementation by gender. The monitoring system should include initial situation of agent-farmer relationship, changes and experiences with approaches to reaching women farmers. This would facilitate the necessary adjustment of policies, strategies and programmes to ensure that women farmers are reached in extension delivery.

BIBLIOGRAPHY

Adair John. **Understanding Motivation**. England: Talbot Adair Press, 1990

Afonja, S. Land Control: A critical factor in Yuroba Gender Stratification. Robertson, C., and Berger, I., (Eds) Women and class in Africa. New York: Africana Publishing Company (Holmes and Meier Ltd.), 1986 Chapter 5. (From **All in Good Time Women's Agricultural Production in Sub-Saharan Africa**. (Ed.) R. Grellier Natural Resources Institute. Overseas Development Administration, 1995. Abstract No. 2)

Aldag, Ramon J. and Stearn, Timothy M. **Management**. Cincinnati, Ohio: South-Western Publishing Co., 1987.

Al-Hassan, Ramatu. Access of Rural Women to Formal Credit Institutions, in Breth A. Steven. (Ed). **Proceedings of the workshop on Women, Agricultural Intensification, and Household Food Security.** held at the Sasakawa Centre. University of Cape Coast, Ghana, 25-28 June 1996. Mexico City: Sasakawa Africa Association, 1997:123-128.

Almy, S. W. and others. Farming Systems of Meme Division, South West Province of Cameroon. Ekona: Testing and Liaison Unit, National Cereals Research and Extension Programme 1988. in Walker, Tjip S. **Innovative Agricultural Extension for Women**: A case Study in Cameroon. WPS Working Paper No. 403 Women in Development Division Washington. D. C.: World Bank, 1990

Alreck, Pamela R. and Settle Robert B. **The Survey Research Handbook**. Homewood, Illinois: Irwin Inc., 1985.

Andah, Kwaku. Ghanaian women in Agriculture: The Case of food production, National Council on Women and Development (NCWD) **Proceedings of the Seminar on Ghanaian Women in Development** (4-8 September, 1978).

Ardayfio -Schandorf, Elizabeth. Household Structure and Rural Food Security in Africa in Breth A. Steven. (Ed). **Proceedings of the workshop on Women, Agricultural Intensification, and Household Food Security**. held at the Sasakawa Centre. University of Cape Coast, Ghana, 25-28 June 1996. Mexico City: Sasakawa Africa Association, 1997:25-30.

Arhin, K. Capital Formation among Ghanaian Women. Report submitted to the National Council on Women and Development NCWD, 1978 in Brown, Charles K. **Gender Roles in Household Allocation of Resources and Decision-Making in Ghana**. Ghana: Family and Development Programme, 1994.

Aronson, Elliot. **The Social Animal**. (6th ed). New York: W. H. Freeman and Company, 1992.

Asante, M. S. **The role of rural Women in the Development process in Ashanti**. Unpublished Masters Thesis. Department of Planning, University of Science and Technology, 1977.

Bagchee, Aruna. **Agricultural Extension in Africa**. World Bank Discussion Papers Africa Technical Department. 231. Washington DC: World Bank. 1993.

Bales R.F. and Borgatta, E.F. Size of group as a factor in the Interaction Profile 1952. (Ed) in Paul Hare. **Hand book of Small Group Research**. New York: Free Press, 1962.

Baron A. Robert, **Behavior in Organizations**. (2nd ed.), Boston: Allyn and Bacon 1986

Bennel Paul. **Intergroup relationships in Institutional Agricultural Technology Systems**. International Service for National Agricultural Research ISNAR Linkages Theme Paper No. 2.388.984.4 1989.

Bennis, G. W., Schein, H.E., Steele, F.I. and Berlew E. D. **Interpersonal Dynamics: Essays and Readings on Human Interaction.** Homewood, Illinois: The Dorsey Press, 1968.

Benor, Daniel and Baxter, Michael. **Training and Visit Extension**. Washington. The World Bank 1984

Boone, E, J. **Developing Programmes in Adult Education**. Englewood Cliffs, NJ: Prentice Hall, 1985.

Bortei Doku, Ellen. A framework for Intergrating Gender Interests in Development Programmes in Ghana (Ed). Ernest Aryeetey. in Planning African Growth and Development: Some Current Issues. **Proceedings of the ISSER/UNDP International Conference on Growth and Development in Africa.** Held at the University of Ghana, Legon, March13-17, 1989. Ghana: ISSER/UNDP 1992. 348-371.

Bortei-Doku, E. In-Service Training of Extension Staff. A successful Ghanaian experiencing. **Training for Agricultural and Rural Development**. Rome: FAO, 1984. 87-94.

Boserup, E. **Women's role in economic Development**. London: George Allen and Urwin, 1970.

BRIDGE, Briefing on Development and Gender: **Background paper on Gender issues in Ghana**. Report prepared for the West and North Africa Department Overseas Development Administration (ODA), UK, January 1994

Brown, Charles K. **Gender Roles in Household Allocation of Resources and Decision-Making in Ghana**: Ghana: Family and Development Programme, 1994

Carney J., and Watts M. Manufacturing Dissent: Work, Gender and Politics of Meaning in Peasant Society. Africa 60.2 (1990): 207-241. (From **All in Good Time Women's Agricultural Production in Sub-Saharan Africa**. (Ed.) R. Grellier Natural Resources Institute. Overseas Development Administration, 1995. Abstract No. 19)

Carr, M., and Sandhu, R. Women, Technology and Rural Productivity: An Analysis of the Impact of Time and Energy Saving technologies on Women. UNIFEM Occasional Paper No. 6. New York: United Nations Development Fund for Women. (From **All in Good Time Women's Agricultural Production in Sub-Saharan Africa.** (Ed.) R. Grellier Natural Resources Institute. Overseas Development Administration, 1995. Abstract No. 21)

Carter et al (1956) in Heap, Ken. **Group Theory for Social Workers: An Introduction.** Oxford: Pergamon Press, 1977.

Casley, D.J. and Kumar, K. **The Collection and Analysis and Use of Monitoring and Evaluation Data.** Washington DC: John Hopkins Press, World Bank, 1988.

Chapple, Eliot D. and Coon, Carleton S., **Pronciples of Anthropology**. New Jersey: Henry Holt and Company. 1912:36-42.

Charon, Joel M. **Sociology : A Conceptual Approach**, (3rd ed.) 1989 Allyn and Bacon, 1990

Chitambar, J. B., **Introductory Rural Sociology**: A Synopsis of Concepts and Principles. New Delhi, India: Wiley Eastern Limited, 1973

Claar, J. B. and Bentz, R. P. Organizational Design and Extension Administration (Ed) E. Burton Swanson **Agricultural Extension a reference manual.** (2nd ed.) Rome: FAO, 1984. 161-183.

Cohen, J. M. and Uphoff, N.T. **Participation's Place in Rural Development: Seeking Clarity through Specificity**: Vol 8, 1988: 213-235.

Compton, Beulah R. and Galaway, Burt. **Social Work Processes**. 5th .Edition. California: Brooks/Cole Publishing Company, 1994.

Coyle, Grace. Group Work with American Youth, New York: Harper and Row, (1948), in Compton, Beulah R. and Galaway, Burt. **Social Work Processes**. (5th .Ed.) California: Brooks/Cole Publishing Company, 1994.

Davis James A. Structural Balance Mechanicl Solidarity, and Interpersonal Relations. Chapter 4 **Sociological Theories in Progress** (Eds) Joseph Berger, Morris Zelditch, Jr. and Bo Anderson Vol 1 Part One/Social Interaction. Boston: Houghton Mifflin Company, 1996:74-101.

Diaw, K. Mobilizing Endogenous Potentials for District Development in Ghana: A Study of Dangme West District. **Spring Research Series No. 9,** D. Kolander. Germany: U.K. Poggel abR. Dortmund, 1994.

DPCU. **Dangme West District Assembly, 5 Year Medium Term Development Plan (1996-2000).** The District Planning Coordinating Unit, 1996. (unpublished)

Donkor, Franklin, Deputy Director, Department of Agricultural Extension Services. Personal communication, October 7,1996

Due, J. M., Mollel, N. and Malone, V. Does the T&V reach female headed families? Some evidence from Tanzania. **Agric. Administation and Extension. 26**: 1987:209-217

Duncan, Beatrice. **Women in Agriculture in Ghana**. Friederich Ebert Stiftung.1997

FAO **Agricultural Extension and Farm Women in the 80's** Food and Agriculture Organization of the United Nations Rome:FAO. 1993.

Fiadjoe, F. Y.M., Al-Hassan, Ramatu, and Canacoo Vincentia. **National Agricultural Extension Project Beneficiary Assessment Of The Agricultural Extension Service.** Legon: 1997. (unpublished)

Fraenkel, J.R. and Wallen, N.E. **How to Design and Evaluate Research in Education**. (2nd Ed.) New York: McGraw-Hill Inc., 1993.

Geddes and Grosset **English Dictionary** (New ed.) Scotland: Geddes and Grosset Ltd.

Geker, J., Fiadjoe, F Y. M., Sakyi-Dawson, Owuraku, Attendem, Paschal. A **Comparative Stuty of the Extension Systems in Ghana**, 1990

GGDP **Gender Analysis in Crop Production in Ghana: A Handbook**, Ghana - CIDA Grains Development Project, Crops Research Institute, Kumasi, Ghana, September, 1993.

Grieco, Margaret. Beyond the Policy Table: Gender, Agriculture, and the African Rural Houeshold (Ed). Breth A. Steven. **Proceedings of the workshop on Women, Agricultural Intensification, and Household Food Security**. held at the Sasakawa Centre. University of Cape Coast, Ghana, 25-28 June 1996. Mexico City: Sasakawa Africa Association, 1997:9-24.

Gura, S. Extension Approaches to Reach Rural Women. **Training for Agricultural and Rural Development**. Rome: FAO, 1985:1-10 .

Haleegoah, J. **Gender Roles in Maize and Legumes Production** Paper presented at the 13th Annual National Maize and Legumes Workshop. Kumasi, 1993.

Hamada, D. Providing Agricultural Extension to farm women through male technicians in Yemen Arab Republic. **Training for Agricultural and Rural Development**. Rome: FAO, 1985:21-28.

Hare, A. P. Interaction and concensus in different sized groups. American Sociological Review. Vol. 17: 1952:261-267 in Paul Hare. **Hand book of Small Group Research**. New York: Free Press, 1962.

Heap, Ken. **Group Theory for Social Workers: An Introduction.** Oxford: Pergamon Press, 1977.

Hewitt, John P. **Self and Society: A Symbolic Attractionist Social Psychology**. (3rd ed). Massachusetts: Allyn and Bacon Inc, 1984.

Hinde, Robert A. **Towards Understanding Relationships**. London: Academic Press Inc., 1979.

Hocking, C. The Impact of Mobile Ox-Ploughing Courses for Women: A study in Kaoma East and in Areas Surrounding the Lui Valley, Western Province, Zambia. Diss.:University upon Tyne, 1991. 50. (From **All in Good Time Women's Agricultural Production in Sub-Saharan Africa**. (Ed.) R. Grellier Natural Resources Institute. Overseas Development Administration, 1995. Abstract No. 21)

Homans, George C. **The Human Group**. London: Routledge and Kegan Paul, 1951

Homans, George C. Social Behavior as Exchange. **American Journal of Sociology. Vol.63,** No.6, The University of Chicago, Press May, 1958: 597-606

Homans, George. C. The Western Electric Researches in Fatique of Workers New York:Reinhold, 1941:56-65. Rpt. (Eds) Michael T. Matteson and John M. Ivancevich **Management and Organisational Behavior Classics** (5th ed) Illinois: Irwin Inc., 1993:41-249.

Howard, Michael C. **Cultural Athropology**. (4th ed) USA: Harper Collins College Publishers, 1993.

JICA, Summary Report **Upgradihg of Women's Technical Knowledge Level for the improvement of Rural Life.** Japan International Co-operation Agency. March 1993

Jiggins, J. Gender-Related Impacts and the work of the International Agricultural Research Centers. **UGIAR study Paper No. 17** Washington, D.C: The World Bank, 1986.

Johnson, Janet Buttolph and Joslyn, Richard A. **Political Science Research Methods** . New Delhi: Prentice-Hall of India Private Limited, 1989.

Johnson, R.A., Newell, W.T. **Operations Management: A Systems Approach.** Boston: Haughton Miffinn Company, 1972.

Keller, R. Development for Rural Zambian Women. **Training for Agriculture and Rural Development**. Rome: FAO, 1985:30-37.

Korang-Amoako, S. Agricultural Extension and Constraints to Women's Productivity. (Ed) Breth A. Steven. **Proceedings of the workshop on. Women, Agricultural Intensification, and Household Food Security**. held at the Sasakawa Centre. University of Cape Coast, Ghana, 25-28 June 1996. Mexico City: Sasakawa Africa Association, 1997:98-101.

Kuenyehia, A. Right of Women under National and International Laws. Published by the Friederich Ebert Foundation, 1995 in Beatrice Duncan. **Women in Agriculture in Ghana**. Friederich Ebert Stiftung.1997

Kwawu Esther Personal communication 15th May, 1995. Regional Director of Agriculture, MoFA. Greater Accra.

Lawson, Tony and Clarke, Elizabeth. **Concise Sociology: A GCSE Guide** London: Bell and Hyman, 1986.

Levenson, Myron H. **Human Relationships: An introduction to Sociological Concepts**. Englewood Cliffs: Prentice-Hall Inc., 1974.

Little William, Fowler, H. W. Coulson, J. **The Shorter Dictionary** (Ed) C.T. Onions Vol.1&2 Oxford: Claredon Press, 1950

Liuma, L. L. **The Involvement of Women in Animal Power Utilization in Malawi**. Lilongwe, Malawi: Animal Power Utilization Project, FAO, 1989

Lockwood, M.E., Jamison D. J., and Lall, L. S. **Economic Development an Cultural Change Farmer education and Farm efficiency a Survey** 1980. 29. 37-76

Lundberg G. A, Hertzler, Virginia B. and Dickson Lenore . Attraction Patterns in a University, **Sociometry**, 1949, 12, 158-169 in Paul Hare. **Hand book of Small Group Research**. New York: Free Press, 1962.

Luthans, Fred **Organizatioal Behavior** (5th ed) McGraw-Hill International Editions. Management Series. 1989

Mabry, A. Edward and Barnes, E. R. **The Dynamics of Small Group Communication**. Englewood Cliff: Prentice Hall Inc., 1980.

Maunder, Addison H. (Ed) **Agricultural Extension: A reference Manual**. Rome FAO 1973

McCormick, E. and Jiffin, T.. **Industrial Psychology**, (6th ed). Englewood Cliffs, NJ: Prentice-Hall, 1974.

McDonough, Gary Wray and Pastora, Grijalbo, Maria Victoria. **Language history and Power: A Language Shift of the Elite in Industrial Barcelona** Revista Internacional de Sociologia; Spain.1987, 45, 1, Jan-Mar, 217-210 in PC-SPIRS 3.30 Sociofile 1/74-12/94

Maletzke 1963 in McQuail, D. and Windahl, S. **Communication Models for the study of mass communications**. New York: Longman Inc., 1984.

Mensah, Patience. Welcoming Addresses . (Ed) Breth A. Steven. **Proceedings of the workshop on. Women, Agricultural Intensification, and Household Food Security**. held at the Sasakawa Centre. University of Cape Coast, Ghana, 25-28 June 1996. Mexico City: Sasakawa Africa Association, 1997, 1-2.

Mohr, Lawrence B. Understanding Significance Testing in Lewis-Beck, Michael S (Ed). **Basic Statistics: international Handbooks of Quantitative Applications in the Social Sciences**. Singapore: Sage Publications Toppan Publishing. 1993:155-156.

Muchena The Effect of Ox Sharing Arrangement on the Supply and Use of Draught Animals in the Communal areas of Zimbabwe - Preliminary Findings. Cousins, B., Editor. People Land and Livestock. Zimbabwe: Centre for Applied Social Sciences, University of Zimbabwe, in 1989. (From **All in Good Time Women's Agricultural Production in Sub-Saharan Africa.** (Ed.) R. Grellier Natural Resources Institute. Overseas Development Administration, 1995. Abstract No. 71)

Muir, Donald E. **A Comparison of "Black and White Intergration Attitudes on Deep South Campus**: A, Research Note University of Alabama, Sociological - Spectrum; 1990, 10, 1, 143-153 in PC-SPIRS 3.30 Sociofile 1/74-12/94.

Muzale, P.J. and Leonard, D.M. Women's Groups and Extension in Kenya: Their Impact on Food Production and Mlanutrition in Baringo, Busia and Taita-Taveta, Kenya. Report to the Ministry of Agriculture, Kenya. University of California, Berkeley, Managing Decentralization Projects. in S. Gura, Extension Approaches to Reach Rural Women **Training for Agricultural and Rural Development**. Rome: FAO, 1985:1-10.

Myers, David G. **Social Psychology** (3rd ed.) New York. McGraw-Hill. Inc. 1990.

National Agricultural Extension Project: Staff Appraisal Report, Republic of Ghana, February 11, 1992, Report No.9847-GH.

Natpracha, P. and Williams, B. Working with Rural women **Training for Agriculture and Rural development**. Rome: FAO, 1985:39-45.

Obimpeh, S.G. **Ministerial Directive on Unified Agricultural Extension under the National Agricultural Extension Project of Medium Term Agricultural Development Programme**. 1992.

Oppong, Christine. The Multiple Roles of Rural African Women. (Ed) Breth A. Steven. **Proceedings of the workshop on. Women, Agricultural Intensification, and Household Food Security**. held at the Sasakawa Centre. University of Cape Coast, Ghana, 25-28 June 1996. Mexico City: Sasakawa Africa Association, 1997:31-40.

Outhwaite, William & Bottomore, Tom. (Eds). **"The Blackwell Dictionary of Twentieth-Century Social Thought"**. Oxford: Blackwell Publishers, 1994.

Pellow, Deborah. **Women in Accra: Options for Autonomy** Michigan:. Reference publications Inc., 1977.

Pincus, Allen and Minahan, Anne. **Social Work Practice: Model and Method**. Itasca, Illinois: F.E. Peacock Publishers, Inc., 1973.

Postel, E. and Schrijvers J. (Eds) "A woman's Mind is Longer Than a Kitchen Spoon" Report on Women in Sri Lanka. Research Project on Women and Development. Leiden (Netherland). State University of Leiden. in S. Gura. "Extension Approaches to Reach Rural Women" **Training for Agricultural and Rural Development**. Rome: FAO, 1985:1-10.

Psathas, G. Phase movement and equilibrium tendencies in interaction process in psychotherapy groups. Sociometry, Vol. 23 1960:177-194, in Heap, Ken. **Group Theory for Social Workers: An Introduction** Oxford: Pergamon Press, 1977

Robson R. A. H. The Group ,Structure in mixed sex triads (mimeo) 1990. 1966 in Heap, Ken. **Group Theory for Social Workers: An Introduction.** Oxford: Pergamon Press, 1977.

Roling, N. **Extension Science: Information Systems in Agricultural Development**. Cambridge: Cambridge University Press, 1988.

Ruddock, Ralph **Roles and Relationships** (Ed) Noel Tims. London and Henley: Routledge and Kegan Paul, 1976.

Saito, K.A. and Spurling, D. Agricultural Extension for Women Farmers. **Interpaks Digest Vol.1 No.3**, Fall, 1993:9-10.

Saito, K.A. and Weidemann, C.J. **Agricultural Extension for Women Farmers in Africa**. Washington D.C.: Discussion Paper 103, World Bank, 1990.

Sato Juichi. Welcoming Address. (Ed) Breth A. Steven. **Proceedings of the workshop on. Women, Agricultural Intensification, and Household Food Security**. held at the Sasakawa Centre. University of Cape Coast, Ghana, 25-28 June 1996. Mexico City: Sasakawa Africa Association, 1997:2-3.

Schaefer, Richard T. **Sociology**. (3rd ed). ME McGraw-Hill, 1989.

Scheflen, Albert How Behavior Means (Garden City New York: Ancher Books, 1974, in Zastrow Charles and Kirst-Ashman Karen. **Understanding Human Behavior and the Social Environment Nelson** - Chicago. Hall Publisher, 1987.

Schuh, Edward G. Why Does Gender Matter, (Ed) Breth A. Steven. **Proceedings of the workshop on. Women, Agricultural Intensification, and Household Food Security**. held at the Sasakawa Centre. University of Cape Coast, Ghana, 25-28 June 1996. Mexico City: Sasakawa Africa Association, 1997:174-176.

Seinfert, M. The adoption of Animal Traction in a West African Savannah Area - an example of Autonomous Reactions to Population Growth. Quarterly Journal of International Agriculture 32.3.1993:280-292. (From 1989. in R. Grellier. (Ed) **All in Good Time Women's Agricultural Production in Sub-Saharan Africa.** Natural Resources Institute NRI ODA 1995:44 Abstract No. 91).

Seltiz, C. Wrightsmann, S. and Cork, S. W. **Research Methods in Social Relations**. (3rd Ed.) 1976.

Shaefer Richard T. **Sociology** New York: McGraw Hill Inc., 1989

Shalinsky, W. Group Composition as an Element of Social Group Work Practice. **Social Service Review XLIII**, 1 March 1969.

Sharland, R. Extension in subsistence Agricultural Enterprises in Sudan **In Training for Agriculture and Rural Development**. Rome: FAO, 1981

Shaw, Marvin E. **Group Dynamics : The psychology of Small Group Behavior** .Chapter 6 .*how*. New York: McGraw Hill Inc.1976

Snedecor, George W. and Cochran William G. **Statistical Methods.** The Iowa State University Press, Iowa, 1967

Sofranko J.A. Introducing Technological Change: The Social Setting. Burton E. Swanson (Ed). **Agricultural Extension : A Reference Manual**. (2nd Ed.). Rome: FAO, 1984:56-76.

Spring, A. Reaching Female Farmers through male extension workers in Malawi. **Training for Agriculture and Rural Development**. Rome: FAO, 1985.

Staudt, K. A. Women Farmers and Inequities in Agricultural Services. Bay, E. G., Editor. Women and Work in Africa. Colorado, USA: Westview Press, 1982. Chapter 10. **From All in Good Time Women's Agricultural Production in Sub-Saharan Africa**. (Ed). R. Grellier Natural Resources Institute. Overseas Development Administration, 1995. Abstract No. 102)

Stogdill, R. M. Individual Behavior and Group achievement New York: Holt and Reinhart and Winston 1959 in Mabry, A. Edward and Barnes, E. R. **The Dynamics of Small Group Communication**. Englewood Cliff: Prentice Hall Inc., 1980.

Stonner, J.A.F. and Wankel, C. **Management**. (3rd Ed). Prentice-Hall International, Inc., 1986.

Sutherland, R.L., Woodward, J. L.., and Maxwell, M. A., **Introductory Sociology**, Philadelphia: Lippincot, 6th ed. 1961. in Chitambar, J. B., **Introductory Rural Sociology**: A Synopsis of Concepts and Principles. New Delhi, India: Wiley Eastern Limited, 1973.

Swanson, Burton E. Prre-Service Training of Extension Personnel B. E. Swanson (Ed). **Agricultural Extension: A Reference Manual.** 2nd ed.) Rome: FAO, 1984.197-205.

Tachie, E.I., **Financial Problems of Ghanain Women engaged in Fish Handling and the Role on Banking Institutions: A case Study of Chorkor and Agricultural Development Bank**, BSc Dissertation: Home Science, University of Ghana (Legon, 1987).

Takemura, Kazuhisa. The effect of Interpersonal Sentiments on Behavioral Intention of Helping Behavior Among Japanese Students. **Journal of Social Psychology**. **Oct Vol.** 133(5) 1993:675-681. PC SPIRS 3.30 Journal Articles 1/87-11/94.

Tamakloe Martha. A study of mixed crop farmers in Nkawie Toase Area National Council on Women and Development (NCWD) **Proceedings of the Seminar on Ghanaian Women in Development** (4-8 September, 1978).

Tetebo, R. Personal Communications. Director of Women in Agricultural Development, 15th May, 1995

Tetebo, R. Welcoming Address . (Ed) Breth A. Steven. **Proceedings of the workshop on. Women, Agricultural Intensification, and Household Food Security**. held at the Sasakawa Centre. University of Cape Coast, Ghana, 25-28 June 1996. Mexico City: Sasakawa Africa Association, 1997:6-7

Thibaut, J. W.and Kelly, H.H. **The Social Psychology of Groups**. New York: Wiley, 1959.

Thomas, E.S. **Behavioral Science for Social Work. Themes in Smalll Group Theory.** Free Press. 1967. in Douglas, Tom. A decade of Small Group Theory 1960-1970.London: BookStall Publications, (1970).

Thomlinson, R. **Sociological Concepts and Research, Acquisition, Analysis and Interpretation of Social Information**. New York: Random House, 1970.

van den Ban A.W and Mkwawa, D.S. Towards Participatory Training and Demand Driven Training and Visit (T&V) Agricultural Extension System: Acase of Tanzania. **European Journal of Agricultural Education and Extension,** Vol. 4, no.2. 11997:17-23

van den Ban, A. W. and Hawkin H. S. **Agricultural Extension**.. England: Longman Scientific and Technical 1988

Walker, Tjip S. **Innovative Agricultural Extension for Women: A case Study in Cameroon**. WPS Working Paper No. 403 Women in Developmet Division Washington. D. C.: World Bank:1990

Watson, Jeanne and Potter, Robert. An Analytic Unit for the Study of interaction. **Homan Relations XV.** August 1962.245-63

West, Candice. When the Doctor is a "Lady": Power, Status, and Gender in Physician Patient Encounters.**Symbolic Interaction**; 7,1, Sping 1984, 87-106.

Whitehead A. Effects of technological change on Rural Women: **A Review of Analysis and Concepts in Technology and Rural Women: conceptual and empirical issues** Chapter 3 (Ed) I. Ahmed London: George Allen and Unwin 1985:27-64.

Whitehead, A. Wives and Mothers: Female Farmers in Africa. Adepoju, A., and Oppong, C Editors. Gender Work and Population in Sub-Saharah Africa. London: James Currey, 1994. Chapter 3 (**From All in Good Time Women's Agricultural Production in Sub-Saharan Africa**. (Ed.) R. Grellier Natural Resources Institute. Overseas Development Administration, 1995. Abstract No. 120)

World Bank **Enhancing Women's Participation in Economic Development**: A World Bank Policy Paper. Washington D.C.: The World Bank, 1994

World Bank. **Women in Development. A progress Report on the World Bank Initiative**. Washington D.C.: The World Bank, 1990.

Zastrow Charles and Kirst-Ashman Karen. **Understanding Human Behavior and the Social Environment Nelson** - Chicago: Hall Publisher, 1987

Zetterberg, Hans L. On Motivation Chapter 6 **Socilogical Theories in Progress** (Ed) Joseph Berger, Morris Zelditch, Jr. and Bo Anderson Vol. 1 Part One Social Interaction. Boston: Houghton Mifflin Company, 1996:124-141.

APPENDICES

APPENDIX 1

QUESTIONNAIRE - FOR FARMERS

GENDER RELATIONS IN EXTENSION DELIVERY IN DANGME WEST DISTRICT OF GREATER ACCRA REGION

This questionnaire aims at evaluating the role of the gender factor in extension delivery from the farmers point of view.

Could you please answer the questions without discussing them with any one.

Where alternative answers are supplied to questions, please tick the appropriate answer.

Where a number of ideas are suggested, please put 1,2,3, etc. against them in order of priority.

Questionnaire number: ..... Date .....
Name of village .....
Age: .....

DEMOGRAPHIC RECORD

1. Sex: 1. Male [ ] 2. Female [ ]
2. Marital status: 1. Married [ ] 2. Single [ ]
   3. Separated [ ] 4. Divorced [ ] 5. Widowed [ ]
3. Residence of spouse: 1. Resident [ ] 2. Absentee [ ]
4. What is your ethnicity?
   1. Native [ ] 2. Settler [ ]
   (For a native go to 11.)

5. If a settler, how long have you been living here?

   1. less than 5 years [ ]
   2. 5 -10 years []
   3. more than 10 years [ ]

6. Why did you come to settle here? .....

7. Do you have the intention of ever going back to settle at home?

   1. Yes [ ] 2. No [ ]

8. If no, give reasons

.....

.....

.....

9. If yes, when do you intend going back?

.....

10. Why did you come to settle at that time?

.....

.....

.....

11. What is your level of education?

   1. Illiterate [ ]
   2. Below Primary 6 [ ]
   3. Up to Primary 6 [ ]
   4. Middle School Educ. [ ]
   5. J.S.S. [ ]
   6. S.S.S. [ ]

7. Secondary Education [ ]

8. Tertiary Education [ ]

9. Others please specify.....

12. Have you had any formal agricultural training?

1. Yes [ ] 2. No [ ]

13. If yes, in which organization?

1. Farm Institute [ ]

2. Demonstration Home [ ]

3. Agricultural College [ ]

4. Others please specify .....

14. What is Size of your farm (major season): .....

15. How many fields do you own? .....

16. Who takes care of your farm apart form you?

1. Man [ ] 2. Woman [ ] 3. Both [ ] 4. No one [ ]

17. Do you own any of the lands on which you farm?

1. Yes [ ] 2. No [ ]

18. What is the land tenure arrangement for the lands that you do not own?

.....

19. Does the land tenure arrangement influence the practice you adopt on your farm?

1. Yes [ ] 2. No [ ]

20. Please explain your response to Q.19 above.

.....

.....

.....

21. Are you engaged in non-farming activities?

1. Yes [ ] 2. No [ ]

(If no, go to 25.)

22. If yes, state the do these non farming activities influence your involvement in extension activities?

1. Yes [ ] 2. [ ]

23. Do these non-farming activities influence your involvement in extension activities?

1. Yes [ ] 2. No [ ]

24. Please explain your response to Q. 23.

.....

.....

.....

NATURE OF RELATIONSHIP

25. Do you know of any agricultural officer who visits farmers in this village?

1. Yes [ ] 2. No [ ]

26. If yes, what is his/her gender?

1. Male [ ] 2. Female [ ]

27. What is the name of this agent? .....

28. How did you know the name?

1. By personal contact.
2. From other sources.
3. Others specify .....

29. What category of farmers does this agent work with?

1. Men [ ] 2. Women [ ]

3. Both [ ]. Others specify .....

30. Has he or she ever paid you a visit?

1. Yes [ ] 2. No [ ]

31. Do you think the visits are necessary?

1. Yes [ ] 2. No [ ]

32. Please explain your response to Q. 31?

.....

.....

.....

33. How do you feel about the agents' visits to you?

(How would you feel should the agent visit you?).

.....

.....

.....

34. Does the gender of the agent have influence on this view?

(Would the gender of the agent influence your feeling?

1. Yes [ ] 2. No [ ]

35. Please explain your response to Q.34.

.....

.....

.....

36. Does your spouse farm?

1. Yes[ ] 2. No[ ]

37. If yes, where does your spouse farm?

1. Family farm with you.
2. Personal separate farm.
3. Family farm and personal farm.
4. Works on another person's farm.
5. Others specify .....

38. Does the agent visit your spouse?

1. Yes[ ] 2. No [ ]

39. Do you think these visits to your spouse are necessary?

1. Yes[ ] 2. No [ ]

40. Please explain your response to Q. 40?

.....

.....

.....

41. How do you feel about the agents to visits to your spouse?

(How would you feel should the agent visit your spouse?).

.....

.....

.....

42. Does the gender of the agent have influence on this view?

(Would the gender of the agent influence your feeling?

1. Yes [ ] 2. No [ ]

43. Please explain your response to Q.34.

.....

.....

.....

44. Have you encountered the services of an officer of the opposite sex in this village?

1. Yes [ ] 2. No [ ]

45. What category of farmers did that agent work with?

1. Men [ ] 2. Women [ ]

3. Both [ ]. 4. Others specify .....

46. Did that agent ever pay you a visit?

1. Yes [ ] 2. No[ ]

47. Do you think those visits were necessary?

1. Yes [ ] 2. No[ ]

48. Please explain your response to Q. 47?

.....

.....

.....

49. How did you feel about that agents visits to you?

(How would you have felt had that agent visited you?).

.....

.....

.....

50. Did the gender of that agent have influence on this view?

(Would the gender of the agent have influenced your view?)

.....

.....

.....

51. Please explain your response to Q.50.

.....

.....

.....

52. Did that agent visit your spouse?

1. Yes [ ] 2. No [ ]

53. Do you think those visits to your spouse are necessary?

1. Yes [ ] 2. No [ ]

54. Please explain your response to Q. 53?

.....

.....

.....

55. How did you feel about the agents to visits to your spouse?

(How would you have felt had that agent visited your spouse?).

.....

.....

.....

56. Did the gender of that agent have influence on this view?

(Would the gender of that agent have influenced your feeling?

.....

.....

.....

57. Please explain your response to Q.56?

.....

.....

.....

58. Do you discuss personal problems with the agent?

(Would you discuss personal problems with the agent?)

1. Yes [ ] 2. No [ ]

59. Explain your response to Q. 58?

.....

.....

.....

60. Does your spouse discuss personal problems with the agent?

(Would your spouse discuss personal problems with the agent?)

1. Yes [ ] 2. No [ ]

61. Why?

.....

.....

.....

62. Have you ever visited the agent?

1. Yes [ ] 2. No [ ]

63 Why?.....

.....

.....

64. If no, would you visit the agent?

1. Yes [ ] 2. No [ ]

65. Why?. .....

.....

.....

66. Did you ever visit the past agent?

1. Yes [ ] 2. No [ ]

67. Why? .....

.....

.....

68. If no, would you have visited the past agent?

1. Yes [ ] 2. No [ ]

69. Why? .....

.....

.....

GENDER ANALYSIS OF INTERACTION

Please respond to the following questions in **TABLE 1-4** for yourself and on behalf of your spouses' interaction with agent. The questions in brackets are meant for farmers the agent does not visit. If the agent is not visiting your spouse now, indicate how you would like them to associate should the need for direct interaction arise.

Table 1: Frequency of farm visits by the present agent.

Attributes	Male farmer	Woman farmer
Who receives the agent on visit? (Who would receive the agent on visit?)	....	....
How many farmers are involved? (How many farmers must be involved?)	....	....

Table 2: Frequency of farm visits by the past agent.

Attributes	Male farmer	Woman farmer
Who receives the agent on visit? (Who would receive the agent on visit?)	.....	.....
How many farmers are involved? How many farmers must be involved?	.....	.....

TABLE 3. Duration of agent-farmer interaction on farm visits.

Attributes	Male farmer	Woman farmer
How much time does the agent with you spend on these visits? (How much time would you have the agent spend with you on a visit?)	.....	.....
Give reasons	.....	.....

TABLE 4. Duration of agent-farmer interaction on farm visits.

Attributes	Male farmer	Woman farmer
How much time does the agent with you spend on these visits? (How much time would you have the agent spend with you on a visit?)	.....	.....
Give reasons	.....	.....

Please express your views on the following questions in TABLES 5 and 6..

TABLE 5. The Nature of activities conducted with the present agent

Activity	Male farmer	Woman farmer
a. List three activities you undertake with the male agent (List three activities you would undertake with the male agent)	.....	.....
What do you think about the results?	.....	.....

Table 6. The Nature of activities conducted with the present agent

Activity	Male farmer	Woman farmer
a. List three activities you undertake with the male agent (List three activities you would undertake with the male agent)	....	....
What do you think about the results?	....	....

PARTICIPATION IN EXTENSION ACTIVITIES

Tick the activities listed you took part in and the year of involvement.

ACTIVITY	1995	1996
Mini demonstration		
Contact group		
Extension Test Plot		
Farmers Production Plots		
Special Employment Programme		
Village Extension Motivator		
Farmers Day Durbar		
Trials (Crop, livestock etc)		

APPENDIX 2

QUESTIONNAIRE - AGENT

GENDER RELATIONS IN EXTENSION DELIVERY IN DANGME WEST DISTRICT OF GREATER ACCRA REGION

This questionnaire aims at collecting data to evaluate the role of gender relations in extension delivery from the agents' point of view.

Could you please answer the questions without discussing them with any one.

Where alternative responses are supplied to questions, please tick the appropriate response.

Where a number of ideas are suggested, please put 1, 2, 3, etc against them in order of priority.

Questionnaire number: ..... Date .....

Name of sub-district[1] .....

Major villages in the sub-district .....

Age:	**Sex: Male**	**[ ]**	**Female**	**[ ]**
Marital status:	**Married**	**[ ]**	**Single**	**[ ]**
	Divorced	**[ ]**	**Separated**	**[ ]**

ORGANISATIONAL ISSUES

1. What is your academic qualification?

   1. Certificate in Agriculture [ ]
   2. Diploma in Agriculture [ ]
   3. Degree in Agriculture [ ]
   4. Others, specify.....

2. Have you had any training in gender issues in relation to extension delivery?

1.Yes [ ] 2. No [ ]

3. If yes, please state what you learnt

.....

.....

.....

4 What is the policy of your organization with regards to an agents interaction with men and women farmers?

.....

.....

.....

5. Has your organization communicated strategies that you should use in your interaction with men and women farmers?

1. Yes [ ] 2. No [ ]

6. If yes, what does the strategy state?

.....

.....

.....

Demographic Factors

7. Do you reside within the sub-district?

Yes [ ] No [ ]

8. If married, where does your spouse reside?

---

[1]The term "sub-district" refers to DAES demarcations.

1. Within the sub-district [ ]

2. Outside the sub-district [ ]

9. What in your opinion is the population of farmers in your sub-district?

1. Men ..... 2. Women .....

10. What in your opinion is the composition of the farming population by ethnicity?

1. Native .....% 2. Settler ..... %

11. Are you a native of the sub-district?

1. Yes [ ] 2. No [ ]

12. In what language do you communicate with your farmers?

1. .Local [ ] 2. English [ ] 3. Others [ ]

13. How many contact farmers have you registered this year?

1. Men ..... 2. Women .....

14. What is the spatial distribution of the farmers in the villages in your sub-district?

1.Densely populated [ ]

2.Farmsteads [ ]

3.Clustered homes [ ]

4.Others, please describe .....

15. What is the spatiai distribution of farms in your sub-district?

1.Blocks [ ]

2.Isolated units [ ]

3.Farmsteads [ ]

4.Others, please describe .....

16. Compare the frequency of your visits to men with that to women farmers?

1. Equal frequency of visits to men and women [ ]

2. More frequent visits to men than women [ ]

3. Less frequent visits to men than women. [ ]

17. Explain the nature of your frequency of visits to men farmer?

.....

.....

.....

18. Explain the nature of your frequency of visits to men farmer?

.....

.....

.....

NATURE OF INTERACTION

Frequency of Interaction

16. Compare the frequency of your visits to men with that to women farmers?

1. Equal frequency of visits to men and women [ ]

2. More frequent visits to men than women [ ]

3. Less frequent visits to men than women. [ ]

17. Explain the nature of your frequency of visits to men farmer?

.....

.....

.....

18. Explain the nature of your frequency of visits to men farmer?

.....

.....

.....

Duration of Interaction

19. Compare the frequency of your visits to men with that to women farmers?

1. Equal amount of time with men and women [ ]
2. More time with men than women [ ]
3. Less time with men than women. [ ]

20. Explain why you spend that amount of time with men farmers?

.....

.....

.....

21. Explain why you spend that amount of time with women farmers?

.....

.....

.....

Sentiments of the Interaction

22. How do you usually attend to your men farmers?

1. Individually [ ]
2. With spouse [ ]
3. With other adult household members. [ ]
4. With other contact farmers [ ]

23. Explain your answer to Q.22 ?

.....

.....

.....

24. How do you usually attend to your women farmers?

1. Individually [ ]
2. With spouse [ ]
3. With other adult household members. [ ]
4. With other contact farmers [ ]

25. Explain your answer to Q.24 ?

.....

.....

.....

26. What do you think men farmers feel about your visits to them?

1. Like it [ ]
2. Indifferent [ ]
3. Displeased [ ]
4. Others specify [ ]

27. What do you think women farmers feel about your visits to them?

1. Like it [ ]
2. Indifferent [ ]
3. Displeased [ ]
4. Others specify [ ]

28. What do you think farmers' wives feel about your visits to their husbands?

1. Like it [ ]
2. Indifferent [ ]
3. Displeased [ ]
4. Others specify [ ]

29. What do you think farmers' husbands feel about your visits to their wives?

1. Like it [ ]
2. Indifferent [ ]
3. Displeased [ ]
4. Others specify [ ]

30. Which of these farmers are you comfortable visiting?

1. Men [ ] 2. Women [ ] 3. Either [...]

31. Explain your answer to Q.30 above?

.....

.....

.....

32. Do your men farmers discuss their personal problems with you?

1. Yes [ ] 2. No. [ ]

33. Explain your answer to Q. 32

.....

.....

.....

34.. Do your women farmers discuss their personal problems with you?

1. Yes [ ] 2. No. [ ]

35. Explain your answer to Q. 34

.....

.....

.....

Content of Interaction

Table 1: State the 3 most important activities you undertake with men farmers.

Activity	Purpose	Use to Farmer
1.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
2.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
3.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....

Table 2: State the 3 most important activities you undertake with men farmers.

Activity	Purpose	Use to Farmer
1.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
2.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
3.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....

Relevance of Relationship

36. In your opinion what do men farmers benefit by associating with you?

.....

.....

.....

37. In your opinion what do women farmers benefit by associating with you?

.....

.....

.....

Ecological Factors

38. Have you encountered any restriction in your sub-district on male female interaction that affects your association with farmers?

1. Yes [ ] 2. No [ ]

39. Please explain your response to Q. 38

.....

.....

.....

40. How does your status as a staff of the Department of Agricultural extension services influence your association with men farmers?

.....

.....

.....

41. How does your status as a staff of the Department of Agricultural extension services influence your association with men farmers?

.....

.....

.....

TABLE 3: Please list the 3 most important states of interaction that enhance your closeness with farmers? (Use table 3 below)

MALE FARMERS		**WOMEN FARMERS**	
State of Interaction	**Reason**	**State of Interaction**	**Reason**
1.....	.....	1.....	.....
.....	.....	.....	.....
.....	.....	.....	.....
2.....	.....	2.....	.....
.....	.....	.....	.....
.....	.....	.....	.....
3.....	.....	3.....	.....
.....	.....	.....	.....
.....	.....	.....	.....

TABLE 4: Please list the 3 most important states of interaction that retard your closeness with farmers? (Use table 3 below).

MALE FARMERS **WOMEN FARMERS**

State of Interaction	Reason	State of Interaction	Reason
1.....	....	1.....	....
2.....	....	2.....	....
3.....	....	3.....	....

Table 5: Please classify your association with these categories of farmers.

Use: Very close, Close, Fair, Weak.

Marital Status	Male Farmer	Explain	Women Farmers	Explain
Single	....	....	....	....
Divorced	....	....	....	....
Separated	....	....	....	....
Married	....	....	....	....

42. Must you associate with men and women farmers differently?

1. Yes [ ] 2. No. [ ]

43. Give reasons for your answer in Q. 42.

.....

.....

.....

44. Suggest how your association with men farmers should be?

.....

.....

.....

45. Suggest how your association with women farmers should be?

.....

.....

.....

PARTICIPATION IN EXTENSION ACTIVITIES

Table 6: Indicate the number of men and women participants in the following activities .

ACTIVITIES	1995		1996	
	Men	Women	Men	Women
Mini demonstration				
Contact farmers				
Extension Test Plot				
Farmers Production Plots				
Village Extension Motivator				
Farmers Day Durbar				
Trials (Crop, livestock etc)				
Others,				

Table 7: Indicate the number of men and women farmers who participated in the following Demonstrations in 1996

Type	Men	Women
Field Crops		
Livestock		
WIAD		
Post Harvest		
Field Days		

46. What is the most important factor that influences the co-peration of men in extension activities?

47. Why? .....

48. What is the most important factor that influences the co-peration of women in extension activities?

49. Why? .....

.....

.....

Thank you.

APPENDIX 3

CHI SQUARE VALUE

Chi Square Values For selected Tables

	MALE AGENT				FEMALE AGENT			
Table No.	**Chi-square value**	**Degree of freedom**	**Probability co-efficient**	**Remarks**	**Chi-squared value**	**degree of freedom**	**probability co-efficient**	**Remarks**
4.1	0.52	1	0.38	N. S.	2.91	1	0.08	N. S.
4.1	2.44	1	0.12	N. S	3.27	1	0.7	N.S.
4.2					NOT VALID			
4.3	2.63	1	0.10	N.S.				
4.3	9.5	1	0.33	N.S.				
4.4						1		
4.4					0.43	1	0.5	N.S
4.5					NOT VALID			
4.6					NOT VALID			
4.7	1.7	1	0.19	N.S.	0.44	1	0.68	N.S.
4.7	3.89	1	0.04	**SIG.**	0.17	1	0.30	N.S.
4.8					NOT VALID			
4.9	0.13	1	0.72	N.S	0.19	1	0.66	N.S.
4.9	0.05	1	1.00	N.S.	0.71	1	0.39	N.S.
4.10					NOT VALID			
4.11					NOT VALID			
4.12					NOT VALID			
4.12					NOT VALID			
4.13					NOT VALID			
4.14					NOT VALID			
4.15	0.37	1	1.0	N.S.	0.6	1	1.0	N.S.
4.16					NOT VALID			
4.17	6.44	1	0.01	**SIG**	0.3	1	1.00	N.S.
4.17	1.01	1	0.59	N.S.	0.00	1	1.00	N.S.
4.18	6.10	1	0.70	N.S.	3.19	1	0.136	N.S.
4.18	1.43	1	0.5	N.S.	0.11	1	1.0	N.S.
4.19	4.47	1	0.03	**SIG.**	0.44	1	1.0	N.S.
4.19	4.08	1	0.66	**SIG.**	0.11	1	1.0	N.S.
4.20	0.45	1	0.68	N.S.	0.11	1	1.0	N.S.
4.20	0.12	1	1.0	N.S.	0.07	1	1.0	N.S.
4.21	9.33	1	0.00	**SIG.**	NOT VAILD			
4.22	0.48	2	0.78	N.S.	2.92	2	0.23	N.S.
4.22	3.47	2	0.17	N.S.	0.37	2	0.83	N.S.
4.22	1.36	2	0.51	N.S.	NOT VAILD			
4.22	1.43	2	0.48	N.S.	NOT VAILD			
4.23	0.28	2	086	N.S	NOT VAILD			
4.23	1.28	2	0.53	N.S	1.3	2	0.00	**SIG.**
4.24					NOT VALID			
4.25					NOT VALID			
4.26					NOT VALID			
4.26					NOT VALID			
4.27	1.28	1	0.39	N.S.	1.03	1	1.0	N.S.
4.27	1.46	1	0.34	N,S.	1.53	033	0.50	N.S.
4.28					NOT VALID			
4.29	1.7	1	0.19	N.S	1.78	1	0.2	N.S.
4.29	1.7	1	0.18	N.S.	0.44	1	0.69	N.S.
4.29	3.89	1	0.02	**SIG.**	0.07	1	0.30	N.S
4.29	0.07	1	0.79	N.S.	0.78	1	0.38	N.S.
4.30	7.34.	1	0.00	SIG.	0.667	1	0.50	N.S.
4.71	9.19	1	0.00		102		1.0	
4.74	3.2	2	0.20		NOT VALID			
4.74	8.25	2	0.016	SIG	4.81	2	0.09	

APPENDIX 3 (continued)

	MALE AGENT				FEMALE AGENT			
Table No.	Chi-square value	Degree of freedom	Probability co-efficient	Remarks	Chi-squared value	degree of freedom	probability co-efficient	Remarks
4.74	6.2	2	0.03	SIG.	NOT VALID			
4.74	4.28	1	0.11	N.S.	1.33	1	N.S	
4.75					7.3	1	0.50	N.S.
4.75					0.41	1	0.70	N.S.
4.75					0.34	1	1.00	N.S.
4.76	1.40	1	0.40	N.S.				
4.76	2.55	1	0.22	N.S.				
4.76	0.73	1	1.0	N.S.	0.76	1	0.19	N.S.
4.76	3.07		0.15	N.S.				
4.76								

Chi squared Values for Characteristics of Respondents

Table No.	Chi-square value	Degree of freedom	Probability co-efficient	Remarks
4.31	0.06	2	0.76	N.S.
4.32			NOT VALID	
4.33			NOT VALID	
4.34	3.24	1	1.07	N.S.
4.35	1.06	1	0.35	N.S.
4.36	1.14	2	0.57	N.S.
4.37	2.80	1	1.0	N.S
4.37	1.15	1	0.5	N.S.
4.38			NOT NECESSARY	
4.39			NOT NECESSARY	
4.40			NOT NECESSARY	
4.41			NOT NECESSARY	
4.42.	0.11	1	0.92	N.S.
4.42	0.49	1	1.0	N.S.
4.43	21.61	3	0.00	SIG.
4.44	6.31	1	0.01	SIG
4.44	NOT VALID			
4.45	0.98		0.53	N.S.
4.46			NOT NECESSARY	
4.47			NOT NECESSARY	
4.48			NOT NECESSARY	
4.49	16.36	2	0.00	SIG
4.50	9.62	2	0.01	N.S.
4.51	1.21	2	0.54	N.S.
4.52	3.59	2	0.11	N.S.
4.53	4.87	1	0.03	SIG.
4.53	0.30	1	1.0	N.S.
4.53	0.01	1	1.0	N.S.
4.54			NOT VALID	
4.54	0.15	1	1.0	N.S.
4.54			NOT NECESSARY	
4.55	1.63		0.33	
4.56			NOT VALID	

NOTE: N.S. Not Significant
SIG. Significant

FRONTLINE STAFF DAILY LOG

	OPERATIONAL AREA					NAME OF FLS					MONTH		199..						TOTAL
Date of Visit																			
Sub-Operational Area Visited																			
No. of Village Visits																			
No. of Farmer Groups Met																			
No. of Grp Members Met																			
Other Farmers Trained																			
No. of Male Farmers Trained																			
No of Female Farmers Trained																			
New Village Motivators																			
Cooperators Observed																			
Adopters Observed																			
CROP PRODUCTION COOPERATION OBSERVED																			
Improved Variety																			
Animal Drawn Cultivation																			
Row Planting																			
Plant Spacing																			
Org. Manure Application																			
Fertilizer Application																			
Timely Weeding																			
Pesticide./Fung. Application																			
Harvesting																			
Post Harvest Technology																			
Ag. Eng. Cultivation																			
Agro Forestry																			
Soil & Water Conservation																			
Storage																			
Tree Crop																			
Total Crop Cooperation																			
Crop Demos Shown																			
Crop MDs Established																			
No. of Farmer Training Sessions organised During the month:						for Crops			For livestock...			For WIAD			For Fisheries				
No. of New Farmer Grps Organised During the month:						No. of Field Days Organised in the Month:							No. of Adaptive Trials Established: During the Month						
NOTES:																			
On Constraints, MDs harvested etc																			
You may also use the back																			
pages for Notes																			
Actual No. of Group Members met during the month:						Actual number of other Individual Farmers:					(Note that these can be obtained from the attendance list in your Field Note Book)								
WIAD: Women in Agric. Development, Fung.: Fungicides, Org.: Organic, Ag.: Agricultural MD: Mini demonstration																			

ANIMALS PRODUCTION COOPERATION																		TOTAL
Date																		
Improved Breed																		
Feed																		
Management																		
Housing																		
Animal Health																		
Total Animal Cooperation																		
Animal Demos Shown																		
Animal MDs Est' shed																		
No. Field Days Organised I the Month:			No of Adaptive Trials Established During the Month:															
WIAD COOPERATION OBSERVED																		
Home Management																		
Nutrition																		
Soy Utilisation																		
Food Preservation																		
Total WIAD Cooperation																		
WIAD Demos Shown																		
WIAD MDs Established																		
No. of WIAD Field Days Organised During the Month:			No. of WIAD Adaptive Established During the Month															
FISHERIES PRODUCTION COOPERATION OBSERVED																		
Pond Construction																		
Rearing																		
Feeding																		
Harvesting																		
Processing																		
Total Fish Processsing																		
Fish Demos Shown																		
Fish MDs Est,shed					for Crops			For livestock...			For WIAD			For Fisheries				
					No. of Field Days Organised in the Month:							No. of Adaptive Trials Established: During the Month						
TOTAL COOPERATION																		
TOTAL DEMOS SHOWN																		
TOTAL MDs ESTA'SHED																		
NOTES:																		
No. of Fisheries Field Days Organised During the Month:			No. of Fisheries Adaptive Trials Established During the Month:															
WIAD: Women in Agricultural Development, MD: Mini Demos, DEMOS: Demonstrations, ESTA'SHED: Established																		
					Actual number of other individual Farmers:						(Note that these can be obtained from the attendance list in							
											your Field Note Book)							
WIAD: Women in Agric. Development, Fung. : Fungicides, Org.: Organic, Ag.: Agricultural MD: Mini demonstration																		