

Factors Influencing the Effectiveness of Communication Network among Women Farmers in Chanchaga Local Government Area of Niger State, Nigeria

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Abstract

The study focused on the factors influencing the effectiveness of communication network among women farmers in Chanchaga Local Government Area of Niger State. Random sampling technique was used to select 80 women farmers from four villages and data were collected by the use of questionnaire. The study data were analyzed using descriptive statistics, Likert scale and Logit Regression. The result of the study showed that 43.8% of the respondents were above 41 years, 41.3% had no education while 62.5% reported that extension agents visit them monthly. Group contact was also found to be the most effective means of communication among the women farmers. Farming experience and education had significant ($P>0.05$) and positive effect on communication network while age was significant but negative. Constraints faced by extension workers in reaching female farmers include high illiteracy level among the women, cultural and religious challenges and non- inclusion of women in extension programmes . Based on the findings, it was concluded that group contact method of extension teaching was mostly used by the farmers and thus recommended that group contact should be given much priority in the study area and adult literacy class should be organized for the female farmers.

Key words Communication network, women farmers, extension agents.

Introduction

Communication is "a process by which two or more people exchange ideas, facts, feelings, impressions in a way that each gains a clear understanding of the meaning, intent and use of the message"(Ike,2003). According to him, successful communications in extension requires a skilled communication effectively treated to an appropriate audience that responds as desired. Extension services are essentially communicative (Akeredolu and Ajayi, 1995). The ultimate aim of an extension system is to effectively and efficiently deliver information to end- users in a comprehensible and utilizable manner. Niger state agricultural project (NSADP, 2004) conducted a radio and television programmes aimed at educating farmers on the use of recommended improved maize practices. They also reported that ideally, the ratio of extension workers to farmers should be 1:500 farm families. This is to make extension work easier and effective. Rural women farmers are known to play a vital role in food production and food security. They account for 70%of agricultural work, 80% Of Nigeria food producers and 100% of those who process basic food stuffs consumed in the country and they also under take about 60% to 90% food

marketing (Fresco 1998). Women in general actively participate in farming activities and farm produce processing in addition to their domestic and reproductive responsibility (United Nation, 1996). Fabiyi *et al* (2007) reported that women are heavily involved in food production especially in places like Billiri Local Government Area of Gombe State.

In most countries extension training and services have been staffed mostly by men (Jiggins, 1998) who are not usually trained in agricultural extension methods on how to communicate with women farmers and in gender specific areas. This may be the reason why in a study of women farmers conducted in four different countries (Syria, Nigeria, Thailand and Trinidad) majority of the respondents of Syria (82.5%) Nigeria (65.62%) and Thailand (82.5%). Nigeria (65.62%) and Thailand (41.25%) expressed a preference for female extension agents, while most of the respondents in Trinidad were gender-neutral (Das, 1995). Chale (1991) identified some problems of women farmers in Nigeria to include among others: insufficient and ineffective extension services to farm women, inadequate use of existing women farmers group, urban directed flow of information and few women extension workers. But majority (about 60%) of women farmers in Nigeria are illiterates (Das 1996). Meaning they cannot read and write which makes the use of multimedia such as print to be an unsuitable communication channels to them. This further compounds the problems of communication network with women farmers. Agricultural extension programmes ensure that information on new technologies, plants varieties and agricultural practices industry processing and marketing reaches farmers However in the developing world, it is common practices to direct extension and training services primarily toward men, a survey showed that female farmers receive only 5 % of all agricultural extension services worldwide. Ostyina and Resenbery (1999), however further stated that It is due to lack of effective communication strategies and methods, Moreover, agricultural extension networks do not provide women farmers with satisfactory service and hence there is an urgent need for a better understanding in this regard for developing effective extension and communication networks to reach women farmers.

Objectives of the study

The main objective of this study is to examine the factors that influences agricultural communication networks with women farmers in chanchaga local government area of Niger State. The specific objectives of the study are to:

1. examine the communication network used by extension agents in study area,
2. determine factors influencing effectiveness of communication in the study area,

Methodology

Study Area

This study was carried out in Chanchaga Local Government Area of Niger State. Niger state is located between latitudes 8° 11' N and 11° 20' N and longitude 4° 30' E and 7° 20' E. The annual rainfall is between 1,100 mm to 1,600 mm with average monthly temperature ranging from 23°C to 37°C (Federal office of Statistics 1998).

The soil is suitable for growing crops like root and tubers, cereals like maize, rice etc legumes, seeds and nut, fruit and industrial tree other agricultural possibilities include inland fisheries aquaculture, cattle and sheep, poultry, wild life and pigs.

Method of Data Collection

Respondents were selected using a multi stage random sampling technique. Twenty (20) farmers were selected from each of the four (4) villages giving a total of 80 farmers and the villages selected are Chanchaga, Bwari, Shango and crukpa. Data were collected using interview schedule with the help of trained ADP enumerators under the supervision of the researcher. Data collected include information on socio economic characteristics (age, sex, marital status, years of farming experience etc), Also, distance from extension agent's residence, number of contact with extension agent, income of the women farmer and constraints faced extension agents in reaching the female farmers.

Data Analysis

Descriptive statistics, Likert scale and logit regression was used to analyze the collected data. It was hypothesised that there is no relationship between communication and women farmers. In implicit form, the model is specified as:

$$Y = f(X_1, X_2, X_3, X_4, X_5, X_6, X_7, X_8, X_9, U)$$

Where

Y= the effectiveness of the communication network

X₁=Age of farmer (years)
in school)

X₂=Level of education (number of years spent

X₃=Years of farming experience (years)
respondent

X₄=Dialect spoken by the

X₅=Distance of village from extension agent (km)
female 2)

X₆= Gender (male 1 and

X₇ = Number of contact with the extension agent
farmers (□)

X₈= Income of the women

X₉= Farm size (ha)

U=error term

Results and Discussion

Socio-economic and demographic characteristics of the respondents

The socio-economic characteristics of the farmers were analyzed and the result shows that 43.80% of the respondents were above 41years of age this implies that farming is gradually been left in the hands of the aged. This is in consonance with Alkan, (2010) who reported that there is an increasing number of aged farmers in most rural areas of the country. This might be due to the migration of the youth to the urban centres in search of white-collar jobs. The results also revealed that majority (87.50%) of the female farmers were married which implies that there will be more member of the family working on the farm.

Table: 1.0 Socio-economic and demographic characteristics of the respondents in the study area

Description	No of Respondents	Percentage (%) (80)
Age		
≤ 30	14	17.50
31-40	31	38.70
≥ 41	35	43.80
Marital Status		
Single	3	3.70
Married	70	87.50
Divorced	1	1.30
Widow	6	7.50
Level of Education		
Primary	13	16.30
Secondary	9	11.30
Quranic	25	31.10
No Education	33	41.30
Farm size		
≤ 1.5	25	44.00
1.6-2.0	10	12.50
2.1-3.0	18	22.50
3.1-4.0	12	15
≥ 4.1	4	6.00
Farming Experience		
≤ 11	19	23.70
11-25	19	23.70
16-20	12	15.00
≥ 21	30	37.50

Source: Field Survey 2012

This is in line with Ahmed (2003) who reported that farming communities in Nigeria consider marriage as an important aspect of their culture and hope that family members will help with farming activities. About 41.30% of the respondents had no any form of education. This implies that there are quite a number of women in the area who cannot read nor write. This is in accordance with the findings of Oyetapo (2008) who reported that education help farmers to cope with complexities associated with technological adoption. Furthermore, the result on farm size shows that 22.50% of the respondent had farm size of 2.1 and 3.0. This according to Onwubuya, (2007) is a peculiar characteristic of Nigeria farmers who are mostly small scale farmers Finally, about 37.50% of the female farmers have 21 years and above farming experience this shows that the women have good experience about farming. Akintola (2003), state that farming experience in farming is related to the ability of a farmer to use know information about new practices which ultimately increases the impact of agricultural development of the existing technology.

Extension communication network used by extension agents

Table 2.0 which is on communication network used by extension agents shows that almost all the female farmers (98.70%) were visited by an extension agent. This indicates that the women farmers have access to information about innovations.

Table 2.0: Extension communication network used by extension agents

Extension contact	Percentage (%) (80)
Extension Agent Visit	
Yes	98.70
No	1.30
Frequent Visit	
Bi monthly	11.30
Quarterly	23.80
Monthly	62.50
Yearly	1.30
Not at all	1.30

Source: Field Survey 2012

This finding is supported by Ekwe (2004) who reported that extension agents help to transfer improved technologies to farmers through regular visit which can create an avenue for one- on- one interaction between the farmer and the extension agent while about 62.5% said they were visited once in every month. This agrees with keinde (2004) who reported that farmer's responses to adopt new innovation can be increased by number of extension contact.

Communication network used by extension agents

Table 3.0 reveals that group contact group contact is the most effective way of communication among the female farmers in the study area. This may be due to the fact that majority of the women farmers are above 41 years and have no any form of education as shown in table 1.

Table 3.0: Distribution of respondents by the communication network used by extension agents

Communication	Percentage (%) (80)
Group contact	84.33
Audio visual	8.43
Individual contact	3.61
Radio	2.41
Television	1.22
Total	100.00

Source: field survey, 2012

Group contact provides the extension agent with the advantage of dealing with a group of farmers at the same time and reducing cost per head. It also increases the

coverage of farming community leading to improved dissemination of agricultural innovations among farmers.

Effectiveness of means of communication

Table 4.0 using a Likert scale of 1- 4 shows that the use of contact farmer, group contact and individual contact were highly effective in disseminating information to female farmers. These might be due to age and educational status of the female farmers. However, use of contact farmers can help in dissemination of innovation this is because the chosen farmer speaks the local's dialect and farm on the same soil as the others.

Table 4.0: Distribution respondents base on the effectiveness of means of communication

Means of Communication	Mean
Radio	2.36
Television	2.35
Contact farmers	3.55*
Audio visual	1.74
Group contact	3.66*
Newspapers	1.13
Individual contact	3.55*
ADP	3.1

**Highly effective*

Source: field survey, 2012

Group contact on the other hand tends to help members see, hear, discuss and participate in various activities while individual method gives the extension worker firsthand knowledge of farm and home conditions and point of view of farm people and in turn builds confidence on the part of the farmers in the extension agent.

Factors influencing the effectiveness of communication network

Table 5.0 shows the logit regression result. The result reveals that age is negatively significant at 1%. This implies that as the age of the female farmer's increases, there is a probability that the communication network been used by the extension agents will be ineffective.

Table 5.0: Logit Regression Estimate for Factors Influencing the Effectiveness of Communication Network with Women Farmers in Chanchaga LGA

Variable	Co-efficient	Z-values
Age	-0.7368	-1.85*
Education	0.1959	2.26**
Experience	0.1417	2.54***
Distance	-0.417	-0.11
Extension	-0.1278	-0.31
Income	3.44	-0.77
Farm size	1.5898	2.78***
Constant	9.255	3.60***
Chisquare		35.71***
Pseudo R ²		0.3539

Source: field survey, 2012
Chisquare = 35.71

Logit Regression Estimate of

*** $P < 0.1$, ** $P < 0.5$, * $P < 1.0$

This is in line with the findings of Sofoluwe, Tijani and Baruwa (2011) who reported that youth who are involved in agriculture have been found to be more knowledgeable about innovations and may be willing to take risk and adapts to better farming techniques because of their longer planning horizons. There is a probability that the communication network used by the extension agent will not be effective as the level of education increases this is because the result shows that education was negatively significant at 5% which is not in accordance to the findings of Oladele (2004) who reported that formal education has a positive influence on the adoption of new technologies. Farming Experience was negatively significant at 10%. This implies that as the years of farming experience increase, there is a probability that the effectiveness of the communication network will reduce. This is not in line with the findings of Adeniji (2002) who reported that farming experience helps the farmers to be accustomed to farming challenges, and way of increasing productivity and as well as level of acceptance of innovation towards overcoming their challenges. Lastly, farm size was also negatively significant at 10%. This implies that as the level of farm size of the female famer's increases, there is a probability that the level of effectiveness of communication network used by the extension agents will decrease. This is not in consonance with the findings of Okoye (1998) who reported that adoption of innovation tends to increase as farm size increases.

Constraints of Extension in Reaching Women Farmers

The result on Table 6.0 shows that high illiteracy level, cultural and religious reasons and non inclusion of women in programme planning are among the three most important challenges faced by extension agents in reaching women farmers. High level of illiteracy was recognized as the first constraint face by the extension agents in reaching the women farmers.

Table 6.0: Distribution of Respondents According to Constraints of Extension in Reaching Women Farmers

Constraints	Percentage	Rank
Cultural & religious Challenges	23.10	2 nd
Non-inclusion of women in programme	23.08	3 rd
High illiteracy among women	27.08	1 st
Few numbers of women in extension.	21.28	4 th
Service not favoring	3.26	5 th
Total	100.0	

Source: field survey, 2012

*Multiple responses

Being able to read, write and communicate can help the women farmers to understand and if possible try the new technologies been brought to them by the extension agent. The culture and tradition of women not been able to own or inherit land or have a say in Nigeria in not new, this have in so many way prevented women from engaging fully in agriculture. Non inclusion of women in programme planning

was ranked third. The problem of top-bottom approach in programme planning is still been practice when it comes to solving women's problem and this has led to consistent failure of so many projects. Other constraints include few numbers of women in extension and telecommunication fluctuating services.

Conclusion

The study showed that 41.3% of the women farmers had no any form of education and were above 41 years and this affected the effectiveness of communication network. The finding also shows that group contact method of extension teaching was mostly used by the farmers this may be as a result of poor educational background of the women farmers. This is possible because the method brings specific information with extension agents and the farmer brings benefit.

Recommendation

1. Based on the study it was recommended that appropriate methods must be used in passing information to the women farmers
2. More women extension workers should be employed trained and motivated by government and other private organization
3. Extension organization should always include women farmer's representatives in their

Programme planning so that the strategies of reaching women farmers can be spelt out for the field workers to execute.

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