Agricultural Journal 3 (4): 292-298, 2008
ISSN: 1816-9155

Group Dynamics and Technology Use among Female Cassava Farmers in Akpabuyo Local Government Area, Cross River State, Nigeria

[1]I.O. Nneoyi, [1]M.N. Henry, [2]A.M. Walter and [2]E.E. Ebingha
[1]Department of Agricultural Economics/Extension, Faculty of Agriculture,
University of Calabar, P.M.B. 1115, Calabar, Cross River State, Nigeria
[2]Department of Sociology, Faculty of Social Sciences, University of Calabar,
P.M.B. 1115, Calabar, Cross River State, Nigeria

Abstract: Extension Teaching involves the use of groups approaches in disseminating and training of farmers. The approach is highly promoted and is gaining increasing awareness among development experts in developing countries. The study, therefore is attempt to anlyse the influence of group dynamics on the use of cassava production technologies among female farmers in Akpabuyo Local Government Area. The study reveals a high propensity for female farmers in group activities both with little or no leadership roles ascribed to them. The study also identified the types of female groups to include; co-operatives (90%), Age Grades (23.75%), social clubs (90%), Religious groups (85%), forum leadership (20%), women in Agriculture (23.75%) and Agric extension committees (11.25%). The membership of these associations (groups) shows that social/Religious groups ranked the highest (90%) while age-grades (23.75%) village council (18.75) Forum Leadership (20%) are relatively few. At the same time, agriculturally-oriented groups are relatively few in number, while social clubs and religious organizations are increasingly very high. The relationship between female farmers groups and the use of cassava technologies showed a positive but negligible and significant relationships. By implication, female groups are avenues, through which cassava innovations could be widely adopted by farmers despite that female groups have not been adequately streamlined within existing institutions. The study, therefore, recommends the identification, formation and training of female groups as instruments of growth.

Key words: Female groups, group dynamics, technology, cassava production, Cross River State

INTRODUCTION

In Nigeria, as in most developing countries, cassava (*Manihot esculenta*) is one of the most important carbohydrate sources for more than 100 million peoples. It account for about 70% of the total calorie intake of more than half the population. The crop is virtually grown in all parts of the country with rainfall greater than 100 mm. According to the Food and Agriculture Organization (1996) Nigeria is the highest producer of cassava with about 33 million metric tones. This achievement has been attributed to the improved high-yielding, pest and diseases tolerant cassava varieties produced and released to farmers through collaboration of IITA (Ibadan) and the National Root Crop Research Institute, Umudike (Ikwelle *et al*., 2003). Analysis of gender roles in cassava production (Akpabio, 2003; Dikito-Wachtmeistern, 2001) reveals that the female farmers have for the past few decades contributed significantly to Agricultural Productivity in Nigeria. While technology development and transfer have been the main focus of agricultural extension, several extension teaching methods have been used over the past few years. Models like individual, group and mass media methods have been promoted. However, group teaching methods have been largely recognized as an effective tool in promoting significant levels of technology use among small-scale farmers. The use of group teaching methods is largely dependent on the existing interactions between and within groups and the changes from such interactions (Maunder, 1982; Mboto, 2002). On the whole, scientific technology use among female farmers is generally low. The extension gap among female farmers and the social, economic and cultural barriers imposed in women in traditional African Societies has posed severe limitations on the use of individual teaching methods like personal contacts,

Corresponding Author: I.O. Nneoyi, Department of Agricultural Economics/Extension, Faculty of Agriculture, University of Calabar, P.M.B. 1115, Calabar, Cross River State, Nigeria

face-to-face discussions and home visits. Though, applauded as the best extension teaching methods, yet it does not lend to wide spread information dissemination among majority of female farmers. The use of group models in extension teaching though not new has not been effectively integrated into existing extension systems. Typical farm communities may have primary or secondary groups (Ekong, 2005) yet the groups may not be known and harmonized within the existing extension framework. Therefore, the study is designed to address the following questions:

- What are the types, nature and characteristics of female groups that influence cassava production technology use?
- What are the cassava technologies disseminated to female farmers?
- How does these groups influence cassava production technology use by female farmers?

Group dynamics and technology use: A conceptual framework: The group model to development have been highlighted in the literature, Maunder (1972) noted that general development initiatives like extension services and community development emphasize group action in improving rural conditions and that the welfare of the group superseded the welfare of any individual in their development programmes. The author noted that while extension education emphasizes decision making by the individual and uses co-operation and group action to accomplish what individuals cannot accomplish working alone. The group therefore is an essential instrument used by development experts to analyse the wants, desires and wishes of individuals, how they act and react. Studies on group dynamics (Kolawole, 1991; Windapo and Afolayan, 2005), have shown that group dynamics is a tool that enables extension workers to reach a large number of farmers by organizing or activating existing groups. While Kolawole Opines that group dynamics is the interaction between and within groups and the changes resulting from such interactions, Windapo and Afolayan (2005) perceive group dynamics as processes that take place among members of a group in the process of executing it tasks.

Group characteristics that influences technology use: The role of group methodologies in extension service work and technology use has formed the basis of contemporary extension work (Farrington, 1997; Garforth, 1993; Akinloye and Adisa, 2005; Akpabio, 2005). A group is generally made up of individual members each different from every other member. Groups like individuals, develop wants and desires, some of which they establish as goals. And in their effort to achieve those goals they select certain techniques. While, the individual chooses his goals and adopts techniques largely on his own decision, group choices are a product of many forces, forces within individual members, between individual members and response to external pressures. A group is influenced by three processes among which are the group, goals and techniques. Every group has goals, purposes or objectives. The goals are either vague or implied, but a productive group must have specific goals adopted and understood by group numbers. In a group that is democratic goals are chosen by the members. A group technique implies a predesigned pattern for human interaction as compared with random behaviour. An effective technique motivates and activates so as to integrate both the internal and external forces directed towards the goals of the group. Such techniques are discussions, forums, role-playing, dialogue, interviews and committee hearings. Group characteristics are generally governed by the value systems-things that members feel to be important, what goals they adopt and what methods or techniques they use to attain their goals. People join groups for many different reasons. Some join to enhance their status, some for the opportunity to help others, some to escape boredom and some because their friends and neighbors belong. Productive group action requires that members take part actively in adopting goals, deciding on techniques and in carrying out programmes. Thus, group formation and participation include individual motivation, blocks and adjustments. If individuals most be formed into a group, common interests must be established. Maunder (1972) identified the Internal dynamics of a group as the summation and integration of the various interests, abilities, desires and wishes as well as the blocks and frustrations and adjustments each individual brings to bare in a group. Dynamics here implies energies and forces desired both from individuals and their interaction with each other and the summation and resolution of these forces into active as opposed to static behaviour. The author described the factors influencing internal dynamics of groups. The authors also noted that the External Dynamics of Group are external forces which affect all group activities. Among them are community values, expectations, institutional values, parent group affiliations and control, intergroup competition, prestige and status. These external forces affects every group-its members motivation, goals, methods and on-going activities. The community develops expectations of various groups. External forces may be adjudged restrictive or expensive. Both internal and external dynamics of groups influences

to a large extent the abilities and willingness of individual farmers to join and function in groups (Chamala and Shingi, 1997). The ability of farmers to use technologies have been influenced greatly through groups. Group actions according to Fakoya *et al*. (2000) has gone a long way to helping farmers adopt natural resources management practices. Farmers groups or organizations may be made up of both male and female farmers, however, some groups are women only or men only and such groups members are known to be in the farm enterprise, have no great status difference between them; belong to a single geographical area; know each other well; vary their programmes from night meetings to day trips and to fielddays and see a continuing purpose or benefit (Windapo and Afolayan, 2005), hence, the study analyzed the influences of these group dynamics on female farmers use of cassava production technologies in Akpabuyo Local Government Area of Cross River State.

MATERIALS AND METHODS

The study was conducted in Akpabuyo Local Government Area of Cross River State. The Local Government lies between latitude 4°,47' North and longitude 8°,23' E. It is bordered on the West by the Kwa River and Cross River Estuary and on the east by the Akpayafe River. In the North, it is bounded by Akamkpa Local Government Area while it extends to the coastlines between the mouths of the Kwa and Rio-del-Rey which marks it Southern limits to the Atlantic Coast of the gulf of Guinea. It has a land mass of 816.14 km^2, with a population of 119,987 people, made up of 52,273 males and 57,679 females. In the sixties and early seventies, fishing was the main attraction of the area, but with time, the inhabitants have branched out into other aspects of agriculture mainly oil palm and cassava production. Akpabuyo Local Government is made up of 10 communities including Ikot Nakanda, Ikot Eyo, Ikot-Edem Odo, Ikang North, Ikang Central, Atimbo West, Atimbo East, Eneyo and Idundu/Ayangase Communities respectively. A stratified random sampling technique was used to select communities and respondents for the study. The first stage of sampling involved the random selection of 5 communities such as Ikot Nkanda, Ikot Eyo, Atimbo West and East as well as Ikang North, respectively. From each community, female groups were identified from where 2 were selected from each of the sampled community. A total of 10 female groups from 5 communities were used for the study. From each group, 2 leaders and 6 ordinary members were purposively and randomly sampled for the study. Therefore, for the 10 female groups, 20 groups leaders and 60 ordinary members were used for the entire study. Hence, a sample size of 80 respondent were used. Data were collected using structured questionnaire containing 3 sections, while section one dealt with socio-economic characteristics of their respondents which influences their internal group dynamics, section two sought information on the type of cassava production technologies disseminated to female farmers and finally section three dealt with the nature and characteristics of the female groups. The questionnaire was subjected to content validity by the staff of the Department of Agricultural Economics/Extension and Department of Sociology of the University of Calabar. Data generated were analyzed using descriptive statistics (frequencies, means and percentages. At the sametime, cassava production technologies disseminated to farmers where analysed using a 4-point grading system which includes; Available, Not Available, Using and Not Using, respectively. The Likert scale was used to analyse characteristics of female groups in the study are as; strongly Agree, Agree, Strongly Disagree, Disagree and Neutral. The hypothesis showing the relationship between female groups and cassava production technology use was tested using the Pearson Product Moment Correlation (PPMC).

RESULTS AND DISCUSSION

Socio-economic characteristics of respondents which influences internal and external group dynamics: Table 1 shows the socioeconomic characteristics of female groups in Akpabio Local Government Area, Cross River State. The table reveals that about 10 respondents representing 12.50% are about 20-25 years of age, 11 (13.75%) are 31-35 years, 30 (37.30%) are 36-40 years of age while only about 5% are more than forty years old. This however indicates that female farmers within the ages of 31-40 years belong to one organization or the other. They form the active age grade from which development agencies could target in the formation of groups. Moreover, the educational attainment of the respondents indicates that about 36 of them representing 45% have attained the primary school education, 22 (27.50%) secondary and tertiary education respectively. These could imply that for the formation of any productive group there has to be a form of training programme for group members if the groups must be productive. From the table, 62 of the respondents representing 77.50% are married, 10 of them that is 12.50% are single, with 5 representing 6.25% and 3 representing 3.75% indicated that they are divorced and widowed, respectively. Furthermore, 75 of the respondents that is about 93.75% are Christians with only 5 of them who do

Table 1: Socio-economic characteristics of respondents

Variable	Frequency	Percentages
Age		
20-25 years	10	12.50
26-30 years	11	13.75
31-35	25	31.25
36-40	30	37.50
40 and above	04	5.00
total	80	100.00
Educational attainment		
Primary	36	45.00
Secondary	22	27.50
Tertiary	22	27.50
None	0	0.00
Total	80	100.00
Marital status		
Married	62	77.50
Single	10	12.50
Divorced	05	6.25
Widowed	03	3.75
Total	80	100.00
Religion		
Christianity	75	93.75
Islam	00	0.00
None	05	6.25
Total	80	100.00
Membership of social organization		
Yes	72	90.00
No	08	10.00
Total	80	100.00
Occupation		
Unemployed	14	17.50
Farmer	31	38.75
Full time housewife	21	26.25
Civil servant	12	15.00
Trader	02	2.50
Total	80	100.00
Farm sizes		
0.1-1.5 acres	41	51.25
1.5-2.5 acres	20	25.00
2.5-30 acres	14	17.50
30 and above	05	100.00
total		
Farm enterprises		
Mixed cropping	32	40.00
sole cropping	20	25.00
mixed farming	28	35.00
total	80	100.00
Source of capital		
Market purchases	32	40.00
Government	10	12.50
Husband	20	25.00
Neighbours	15	18.75
Others	13	3.75
Total	80	100.00
Frequency of contacts with extension		
Fortnightly	14	17.50
Once a Month	25	31.25
Rare	30	37.50
None	06	07.50
Total	80	100.00

Source: Field survey, 2006

not lay significant claims to any religion. About 72 of the respondents that is 90% are members of social organizations. This, however is a positive indication of the abilities of female farmers to join or form groups which development agencies and extension staff could take advantage of in targeting innovations (Nwaru, 2003; Akpabio, 2005). The table also shows the occupations of the respondents. While 14 representing 17.50% are unemployed 31 (38.75%) are farmers, 21 (26.25%) are full time housewives, with only 12 (15.00%) engaged in civil service jobs while a negligible 2 representing 2.50% are traders. The farm sizes of the respondents indicate that 41 (51.25%) have farm sizes ranging from 0.1-2.0 acres, 20 (25%) have farm sizes of 1.5-2.5 acres only 14 (17.50%) cultivate farm sizes above 3.0 acres. From table 1, the farm enterprises of the respondents include mixed cropping by 32 respondents representing 40% while 20 (25%) grow cassava alone under sole cropping, while 28 (35%) are into mixed farming, growing-crops and keeping livestock. The sources of capital for the respondents indicates that 32 (40%) acquire their assets from the market through market purchases while 10 (12.50%) get theirs from their husbands and 15 (18.75%) from neighbours while only 3 indicates getting their capital stock from other sources. Finally, Table 1 shows the frequency of extension contacts with the respondents. While 14 respondents representing 17.50% indicates fortnightly visits by extension staff, 25 (31.25%) indicate extension visits once a month, while 30 (37.5%) indicate once in a months while 06 (7.5%) indicate rare extension visits by extension staff. This implies that extension contacts with female farmers and their groups is generally low in the study area.

Cassava production technologies for female farmers and their groups: Table 2 shows the various technologies disseminated and made available to the respondents. Site selection which emphasizes most suitable sites for cassava cultivation is disseminated to 15 (6.25%) respondents while 75 respondents representing 93.75 indicate site selection as not being part of the recommendation packages given by extension. However, the table reveals about 90% adoption rate for site selection. This implies that where the technology is made available, it shows a high adoption rate by farmers. The table also shows that packages on land preparation techniques, 15(6.25%) are available and only 16(20%) are using these techniques, time of planting 12.5%. On seed rate techniques 12.5%, agreed that there are available with only about 6.25% using the technology whereas fertilizers 18.75%, weed control 6.25%, pest control 2.5%, disease control 1.25% are generally low except for packages on improved cassava varieties 43.75% and planting materials which have been made available to farmers. The table generally reveals that extension packages for cassava production are generally not available to female farmers and their groups and where they are available they report low adoption rates except for site selection with an

Table 2: Cassava production technology use by female groups

S/N	Production Technologies	Available	Not available	Using	Not using
1.	Site selection	15(6.25)	75(93.75)	72(90.00)	3(10.00)
2.	Land preparation	15(6.25)	65(81.25)	16(20.00)	64(80.00)
3.	Recommended cassava varieties	35(43.75)	45(56.3)	28(35.0)	52(65.0)
4.	Planting materials	20(25.0)	60(75.0)	10(12.5)	70(87.5)
5.	Time of planting	10(12.5)	70(87.5)	05(6.25)	75(93.75)
6.	Seed rates technique	10(12.5)	70(87.5)	05(6.25)	75(93.75)
7.	Fertilizers	15(18.75)	65(81.51)	02(2.5)	78(97.5)
8.	Weed control herbicides	5(6.25)	75(93.75)	15(18.75)	65(81.25)
9.	Pest control pesticides	02(2.5)	78(97.5)	02(2.5)	78(97.5)
10.	Disease control insecticides	01(1.25)	79(98.75)	10(12.5)	70(87.5)
11.	Crop mixtures				
i.	Cassava/maize/melon	15(18.75)	65(81.25)	35(43.75)	45(56.3)
ii.	Yam/cassava/maize/telferia	25(31.25)	55(68.75)	60(75.0)	20(25.0)
iii.	Cassava/maize/cowpea	36(45.0)	44(55.0)	55(6.75)	25(312.5)
iv.	Yam/maize/cowpea/melon	44(55.0)	36(45.0)	62(77.5)	12(22.5)

Source: Field survey, 2006

Table 3: Types of female organizations

Organization	Membership	Involvement	Leadership status
Co-operative	75(90.00)	28(35.00)	18(22.5)
Age Group	19(23.75)	31(38.75)	12(15.0)
Village Council	15(18.75)	35(43.75)	10(12.5)
Agric. Extension Committees	09(11.25)	61(71.25)	0(0.00)
Women in Agriculture	19(23.75)	61(71.25)	0(0.00)
Forum Leadership	16(20.00)	34(42.5)	0(0.00)
Social Clubs	72(90.0)	28(35.0)	32(40.0)
Religious Group	68(85.0)	32(40.0)	52(65.0)
Other Organizations	78(98.5)	12(15.0)	41(51.25)

Source: Field survey, 2006

adoption rate of 90%. Crop mixtures disseminated to female farmers and their groups indicate low rates of dissemination except for yam/maize/cowpea/melon intercrop with a dissemination rate of 55%. Other cassava intercrops like cassava/maize/melon, yam/cassava/maize/ telferia and cassava/maize/cowpea shows high rate of unavailability. On the whole, Table 2, shows a high rate of adoption for cassava intercrops like yam/maize/tilferia, cassava/maize/cowpea and yam/maize/cowpea/melon (77.55%), respectively. The results as shown in the table is an indication of the low extension output in the study area and very high preference for cassava intercrops.

Types of female organizations: Table 3 shows the types of female organizations in the study area, their membership, levels involvement and leadership status. The results of the survey show that co-operative organisations have the highest member of females about 90% with low levels of active involvement 35% and low leadership status of 22.5%. This indicates that even though women are members of co-operatives, their levels of involvement in terms of active participation in decision-making is low also given that they assumes little or no leadership positions. Also age grades indicates low membership by women 23.75% but where they get more involved in age grade activities they assume little or no leadership positions (15.00%). The table also reveals that women's membership of village council is generally low but high levels of involvement in village council matters and low leadership status of 12.5%. These results indicate that most of the organisations are man-centered in terms of leadership while women only get involved probably as members with little or no leadership responsibilities. Moreover, the table indicates that for organizations like Agricultural Extension committees, women in Agriculture and forum leadership, membership of women is generally low in the study area that is 11.25, 23.75 and 20%, respectively. While women's membership status is low in this organization their levels of involvement ranks highest among all the groups considered by the study. At the same time, the women assume no leadership roles in the group. This would mean that Agricultural extension committees and women in Agriculture are groups sponsored by government to reach out to female farmers and because of the generally low extension output in Cross River State they activities of these groups records low membership as noted by Ntunde (2006). Furthermore, the table reveal that women's membership ranks highest in groups like social clubs and religious organization that is 90 and 35%, respectively, with high levels of involvement and where they assume high leadership status especially in religious activities.

Nature and characteristics of female groups: Table 4 shows the nature and characteristics of female groups in the study area. The results reveals that using a mean cumulative average of 3.13 for any known positive nature and characteristics of the groups all values above 3.13 show a positive indicator of the variables listed in the table. Consequently for group nature and characteristics like Group Communication (3.75) there exist positive communication networks among members of the female

Table 4: Nature and characteristics of female groups

S/N	Group characteristics and nature	SA	A	SDA	DA	N	CUM	CA
1.	Group atmosphere	20(20.0)	30(60.0)	15(45.0)	15(70.0)	10(0.00)	245	3.06
2.	Group communication	10(10.0)	05(10.0)	28(84.0)	32(128.0)	5(25.0)	257	3.75
3.	Group participation	21(21.0)	16(32.0)	14(42.0)	10(40.0)	19(135.0)	460	5.75
4.	Group standards	16(16.0)	24(48.0)	40(120.0)	0(0.00)	0(0.00)	184	230
5.	Social controls	10(10.0)	15(30.0)	15(45.0)	32(128.0)	08(40.0)	253	3.16
6.	Group identity	25(25.0)	30(60.0)	15(45.0)	08(32.0)	02(90.0)	164	2.05
7.	Roles definition	32(32.0)	15(30.0)	12(36.0)	10(40.0)	11(55.0)	193	2.41
8.	Group size	15(05.0)	06(12.0)	25(75.0)	20(80.0)	24(124.0)	299	3.65
9.	Group evaluation	10(10.0)	06(12.0)	25(75.0)	20(80.0)	24(124.0)	299	3.65
10.	Community values	10(10.0)	06(12.0)	31(93.0)	28(112.0)	05(25.0)	252	3.15
11.	Institutional expectations	31(31.0)	22(56.0)	05(15.0)	06(50.0)	10(50.0)	176	2.20

Source: Field survey, 2006, Key: SA = Strongly Agree (1), A = Agree (2), SA = Strongly Agree (3), DA = Disagree (4); N = Neutral (5), CUM = Cumulative, CA = Cumulative Average: Mean Cumulative Agree = 3.13

Table 5: Results of pearson product moment correlation coefficient and test of significance

Variable	R	t-cal	0.05	S
X = Female Groups				
Y = Cassava Technology	0.1	2.907	2.365	Significant
N = 9, Degrees of Freedom N-2 = 7				
S = Significant				

groups which is an indicator that information on available technologies are easily communicated among members. The table shows group participation by female members as recording a very high value of 5.75 which confirms earlier findings that women are actively involved in group activities in the study area. Other group indicators revealed by the survey are social controls (rewards systems) 3.66, though considered low in the study area, group size, 3.65 implying that the sizes of the groups in the study are moderate probably below 30 people considered most as primary or informal groups (Ekong, 2003). Group evaluation reveals a value of 3.65 indicating group processes and progress evaluation is considered highly important by the group members. The table further reveals that community values with a cumulative average value of 3.15 and inter and intra group competition with value of 3.48 are external influences which affects the performance of female groups in the study area. The table however reveals that institutional expectations (2.20) have little or no impact on female groups performance as the use of female groups and their activities have not been adequately mainstream within existing institutional frame work of the extension organizations or even the local administrative structures in the area.

Relationship between female groups and cassava production technology use: A test of hypothesis to show the relationship between female groups and cassava production Technology use conducted using the Pearson Product Moment Correlation shows a positive but negligible coefficient of correlation (r) of 0.10, indicating however that for the study area, there exist a very small but positive relationship between technology use and farmers' groups. Moreover, a test of significance for r reveals that the calculated t-value of 2.907 was greater than the critical t-value of 2.365 at degree of Freedom 7 tested at 0.05 level of significance. Table 5 indicating that the relationship between female groups and cassava production technology use is positive and significant. This implies that technology dissemination by extension personnel should target more of female groups as they demonstrate a high propensity for involvement in local groups and organizations.

CONCLUSION AND RECOMMENDATIONS

As community development and extension services targets formal and informal groups in enhancing the use of innovations by rural people, the need to understand the dynamics of these groups have become crucial in recent times. Local women in rural areas have shown a high propensity for affiliations and group involvements. Therefore, efforts at targeting female group members and their groups show a significant instruments for ensuring the wide spread of innovations especially cassava production technologies which of recent have proven to have attracted considerable government attention. To ensure the effective use of female groups in achieving productivity in cassava production, the study recommends the following:

- Female groups in Local Communities be identified and re-activated as means of reaching out to the generality of the women farmers who now constitute the bulk of the farm labour.
- Female groups and their leaders be exposed to leadership training programmes and general management techniques.
- Institutional framework be put in place to legitimize female groups as instruments of development and innovation diffusion.
- Extension and community development experts be trained in group dynamics to enhance the management of local groups in the development of projects.

- Finally, female farmers should be encouraged and assisted to join or set up groups or organization in their domain with the government facilitating the processes of formation and capacity building.

REFERENCES

Akinloye, J.F. and B.O. Adisa, 2005. Role of Community Based Organizations Commodity Association (CAS) and Non-governmental Activities in Nigeria. In: Adedoyin, S.F. (Ed.). Agricultural Extension in Nigeria. Ilorin, Agricultural Extension Society of Nigeria (AESON), pp: 208-219.

Akpabio, I.A., 2003. Analysis of Gender Roles in Cassava Production in Akwa Ibom State, Nigeria. In: Akoroda, M.D. (Ed.). Root Crops: The Small Processor and Development of Local Food Industries for Market Economy. Proceedings of the 8th Triennial Symposium of the International Society fort Tropical Root Crops-Africa Branch (ISTRAC-AB), Ibadan, pp: 88-91.

Akpabio, I., 2005. Human Agriculture and Social Themes in Agricultural Development, Abaam Publishing Co. Uyo.

Chamala, S. and P.M. Shingi, 1997. Establishing and Strengthening Farmer Organization. In: Swanson, B.E., R.P. Bentz and A.J. Sofranko (Eds.). Improving Agricultural Extension: A References Manual, Rome, Food and Agric. Org., pp: 193-201.

Dikito-Wachtmeister, M.S., 2001. Empowering Women to Achieve Food Security: Social Capital Perspectives, International Food Policy Research Institute. Policy Bruf, Focus.

Ekong, E.E., 2003. Rural Sociology: An Introduction and Analysis of Rural Nigeria. Uyo, Dove Educational Publishers, 2nd Edn.

Fakoya, E.D., C.I. Sodiya and E. Fabusoro, 2000. Natural resources management by local associations in ifedore local government area of Ondo State. J. Environ. Exten., 1(1): 63-68.

Farrington, J., 1997. The Role of Non-Governmental Organizations in Extension. In: B.E. Swanson, R.P. Bentz and A.J. Sofranko (Eds.). Improving Agricultural Extension: Rome, Food and Agriculture Organization, pp: 213-219.

Food and Agriculture Organization, 1996. Production Year Book for, FAO, Rome, Italy.

Garforth, C., 1993. Rural Peoples, Organizations and Extension Communication in Northern Thailand. J. Exten. Sys., 9 (2): 33-64.

Ikwelle, M.I., T.O. Ezulike and O.N. Eke-Okoro, 2003. The Contribution of Root and Tuber Crops to the Nigerian Economy. Akoroda, M.D. (Ed.). Root Crops: The Small Processor and Development of Local Food Industries for Market Economy, Proceedings of the Eight Triennial Symposium of the International Society fort Tropical Root Crops-Africa Branch (ISTRAC-AB), Ibadan, pp: 13-18.

Kolawole, V.B., 1991. Communication Skills and Extension Methodology. Proceedings, Fisheries Development Extensionist Training Course, Department of Fisheries, pp: 76-85.

Maunder, A.H., 1982. Agricultural Extension: A Reference Manual. Rome, Food and Agriculture Organization.

Mboto, W.A., 2002. Intergroup Relations, Clear lines Publications, Calabar.

Ntunde, F.D., 2006. Identifying Important Sources of Agricultural Information on Improved Farming Practices Among Women Farmers in Enugu State, Nigeria. Int. J. Food Agric. Res., 3 (2): 107-122.

Nwaru, J.C., 2003. Gender and Relative Production Efficiency in Food Crop Family in Abia State. The Nig. Agric. J., Agric. Soc. Nigeria, 34: 1-10.

Windapo, O. and S.D. Afolayan, 2005. Group Dynamics and Leadership in Agricultural Extension. In: Adedoyin, S.F. (Ed.). Agricultural Extension in Nigeria, Ilorin, Agricultural Extension Society of Nigeria (AESON), pp: 134-138.