

Assessment of Gender Participation in Private Agricultural Extension System in Rivers State, Nigeria.

Harry, A. T. & Ladu, T.

Dept of Agricultural Extension and Rural Development,
Rivers State University Port Harcourt,
Nigeria.

harryariamabo@yahoo.com

Abstract

This study assessed gender participation in private extension system in Rivers State based on the following objectives: determine the socio-economic characteristic of the responders in the study area, assess the level of gender participation in private agricultural extension services and examine the constraints to gender participation in private agricultural extension systems. Primary data were collected from 152 randomly selected participant of the Shell Petroleum Development Company (SPDC) and Green River Project of Nigerian Agip Oil Company (NAOC) in Rivers State using structured interview schedule, qualitative and quantitative statistical tools were employed for data analyses. The major findings were that 94 percent of the farmers participated in the Private Agricultural Extension Programme. The level of gender participation in most of the extension activities was high. Training by extension agents was ranked first with male (2.74) and female (2.68) with a grand mean score of 2.61 for male and 2.50 for female participants. The study identified lack of adoptable technologies by woman farmers and inadequate storage. The study recommends motivation of farmers, and introductory of gender friendly agricultural technologies including precision farmers approach that will enhance effective participation of farmers in private agricultural extension system.

Keyword: Gender, Participation, Private Agricultural Extension System.

Introduction

Agricultural extension continues to be in transition world wide (FAO, 2006) Government and international agencies are advancing structural, financial and managerial reforms to improve extension, decentralization, pluralism, cost-sharings, cost-recovery, participation of stakeholders in development initiative and the decision and resources that affect men and women (DFID 2007). Agricultural programmes in Nigeria have been designed to benefit the generality of farmers but have often resulted in unintended socio-economic inequalities along gender lines (Agbamu, 2007). The efficiency of technologies generated and disseminated depends on effective participation of gender farmers and communication, which is the key process of information dissemination (Oladele *et al*, 2007). The gender participation in private extension has been an important concept in extension programmes. Men and woman farmers are portrayed as colleagues in research process hence, they are considered to be an active participate in the process. It has been discovered that private extension system has co-existed for along time in many countries pending on the financing communicative intervention. Private extension will concentrate on the commercial resourceful big farmers, favourable environment areas such as irrigated high fertile soil and commercial crop-growing areas. Private extension will perform mostly on profit maximization roles. A significant problem in gender disparity is that in many courses of study, in service training and education in extension methodology there is insufficient examination and discussion of the roles of

rural men and women in agricultural production and rural development (FAO, 2006). Extension services do not address many priority need of rural women-time, inputs, credit, management skills and marketing (Madukwe, 2006). When substantial progress in actions to equalize gender staffing and gender participation in extension activities, benefits of private extensions services are likely to be high where the production of a high value commodity is involved and where linkages with other stake holders (private or public sector) are valued by the group (FAO, 2006) there are various types of farmers group. These include formal co-operative, informal farmers associations or groups, multi-purpose groups and national farmer's organization. The objectives of private extension mainly concern with maximum possible profit to the client through advisory services, because their remuneration obviously link with increased income of the farmers. Private agencies survival depends upon the nature of their performance, so they try to become more efficient and effective in providing services (Dinar, 2004). But private extension systems clients are more committed and careful about extension services, because they are paying for their services (Hassanullah, 2005). Clients make best use of private extension workers time. Private extension agencies transfer the location specific and demand-driven technologies. Technologies become specialized and profitable because private extension ensures timely input supply. Finally, extension personnel become more accountable clients and highly motivated simply because they are getting remuneration from their clients. They become professionally sound and will put in effort to upgrade their knowledge and technical know how (Shekaro2003).

Objectives of the Study

The man objectives of the study was the assess Gender Participation (GP) in private agricultural extension system in Rivers State. The specific objectives of the study were to

- (i) Describe the selected socio-economic factor affecting farmers in Rivers State private extension agencies.
- (ii) Assess to level of gender participation in private agricultural extension system in Rivers State.
- (iii) Identify the constraints to gender participation in private agricultural extension system in Rivers State.

Methodology

The study was carried out in Rivers State. A purposive sample of respondents (farmers) involved in both Shell Petroleum Development Company (SPDC) and Nigerian Agip Oil Company (NAOC) Agricultural Extension Programmes. Through random sampling 88 male and 88 female respondents were selected from a list of 320 target population of participating farmers in 11 operational zones of the private extension agencies (with SPDC having 4 and NAOC having of zones respectively). The 11 operational zones are Rumuekpe/Obelle, Umuechem, Afam and Buguma Creek for SPDC and Omoku, Obrikan, Mdgbede, Okwuzi, Aggah, Idu and Oshie for NAOC. At the end of the survey only 152 questionnaire were properly completed, and were therefore used for the analysis

- (1) A multiple regression technique using the ordinary least squares (OLS) method.
- (2) Participation were measured with the sum (10) of Likert type scale value (1-3) was divided by (3) options to give a mean of 2.00. A cut-off point of 2.00 was established and for the purpose of interpretation, any mean response higher or equal to 2.00 was responded as high participation, whereas any mean response that is lower than 2.00 was regarded low – participation.

This regression equation had the implicit form:

$$Y_1 = f(X_1, X_2, X_3, X_4, X_5, X_6, X_7, e)$$

Y_1	=	$f(X_1, X_2, X_3, X_4, X_5, X_6, X_7, e)$
Y_1	=	extent of participation for male and
Y_1	=	extent of participation for female (were pooled together)
X_1	=	Age (years)
X_2	=	Marital status (Unmarried = 0, married = 1)
X_3	=	House head (Dummy)
X_4	=	Household size (No. of persons living together)
X_5	=	Educational Level (Years of formal school)
X_6	=	Size of hand holding (hectares)
X_7	=	Social Involvement in Farmer Organization (Dummy)
e	=	Stochastic error term

Four functional forms of equation (Cobb Douglas, Exponential and Semi-Log and Linear) were tried and that with the best fit chosen as the led equation. From the fitted model the extent of participation of the farmers was derived.

Result and Discussion

The result in table 1 presents regression analysis. The Cobb-Douglas functional form was chosen as led equation. The result shows that 93.8% of variation explained the participation of the farmers in private agricultural extension services. F-ratio is statistically significant at 1 percent, implying that the model is adequate to be used in further analysis. Age, Number of Children, Farm Size were positively significant at 1 percent and 5 percent level. Marital status, farming experience and income were negatively significant at 1 percent level as expected. Nature of farming was not significant. The implication of the result is that the farmers were more responsible, had interest in farming and were motivated considering their low income status. Farmers Age, Number of Children and Farm Size are some of the factors that should be considered in selection of farmers for participation in private agricultural extension service system. For sustained and effective participation of farmers in private extension service system participant should be motivated considering their low income status.

Table 1: Multiple Regression Results of the Socio-Economic Factors Affecting Participation of the Respondents in Private Agricultural Extension Services

Variables	Double log	Exponential	Semi log	Linear
Content	1.793 (29.340)	1.790 (54.231)	52.022 (14.839)	49.747 (26.252)
Age	1.140 (11.863)***	0.127 (10.108)***	60.196 (10.918)***	6.598 (10.055)***
Marital Status	-1.162 (-9.586)***	-0.184 (-9.470)***	-65.036 (-9.353)***Ns	-9.725 (-8.708)***
Farming Experience	-0.198 (-3.085)***	-0.019 (-1.897)***Ns	-12.332 (-3.344)***Ns	-1.250 (-2.125)***
Nature of Farming	-0.045 (-1.799) Ns	-0.013 (-767) Ns	-2.117 (-1.486)Ns	-0.621 (-1.449)Ns
Number of Children	0.523 (8.473)***	0.050 (8.385)***	31.085 (8.782)***	2.977 (8.681)***
Farm Size	0.015 (1.712)**	0.001 (1.708)***	0.921 (1.842)**	0.045 (1.811)**
Income	1.403 (19.340)***	-0.137 (-19.300)***	-83.339 (-20.024)***Ns	-8.112 (-19.967)***
R2	0.938	0.937	0.936	0.934
F. Ratio	133.362***	133.332***	130.097***	129.857***
N	152	152	152	152

Source: Field Survey, 2016

Value in parenthesis one t-ratio

** t-values significant at 5%

* t-values significant at 10%

***t-values significant at 1%

Note

5% = 1.960

1%=2.576

10% = 1.645

Ns: Not Significant

Level of Gender Participation in Private Agricultural Extension Services

The result in Table 2 present ten (10) items of gender level of participation in private agricultural extension services. Participation level was measured using 10 items based on a 3 point rating scales high = 3, moderate = 2, low = 1. Adding 3, 2, 1 and dividing by 3 obtained a mean value of 2.00. Mean response higher or equal to 2.00 was regarded as high level of participation whereas any mean response that is lower than 2.00 was regarded as low participation from table 2, the level of gender participation in most of the extension activities was high. Training by extension agents was ranked first with male (2.74) and female (2.68) with a grand mean score of 2.62 for male and 2.50 for female participants. The gender indicated high level of participation on these activities because in private extension system clients are more committed and careful about extension services, clients make best use of private extension workers time (Shekara, 2003).

Table 2: Distribution of Respondents according to Level of Gender Participaiton in Private Agricultural Extension Services

S/N	Participation	High	Moderate	Low	Mean Score	Remark	High	Moderate	Low	Mean Score	Remark
1*	Training by extension agent	52 (74.3)	18 (25.7)	0 (0)	2.74	High	56 (68.3)	26 (31.7)	0 (0)	2.68	High
2*	Farmer workshop	49 (70.0)	21 (30.0)	0 (0)	2.70	High	44 (53.7)	38 (946.3)	0 (0)	2.54	High
3*	Farmers field day	49 (70.0)	21 (30.0)	0 (0)	2.54	High	39 (47.6)	43 (52.4)	0 (0)	2.48	High
4*	Exhibition by extension agent	28 (40.0)	35 (50.0)	7 (10)	2.30	High	35 (42.7)	39 (47.6)	8 (9.8)	2.32	High
5*	Organizing other farmers	18 (25.7)	52 (74.3)	0 (0)	2.60	High	56 (68.3)	26 (31.7)	0 (0)	2.68	High
6*	Given any assignment by the agent	42 (60.0)	28 (40.0)	0 (0)	2.60	High	35 (42.7)	47 (57.3)	0 (0)	2.43	High
7*	Consultation with the agent	42 (60.0)	28 (40.0)	0 (0)	2.60	High	35 (42.7)	47 (57.3)	0 (0)	2.43	High
8*	Demonstration on the farm	49 (70.0)	21 (30.0)	0 (0)	2.70	High	43 (52.4)	39 (47.6)	0 (0)	2.52	High
9*	Visited on the farm by agent	49 (70.0)	31 (30.0)	0 (0)	2.70	High	44 (53.7)	38 (46.3)	0 (0)	2.54	High
10*	Visited the extension agent office	49 (70.0)	16 (22.9)	5 (7.1)	2.63	High	44 (53.7)	28 (34.1)	10 (12.2)	2.42	High
	Grand mean				26.11					25.04	
					2.61					2.50	

Source: Field Survey, 2016

Major Constraints Associated with Gender Participation in Private Agricultural Extension System

Table 3 indicates the major constraints affecting gender participation in private agricultural extension systems in Rivers State were lack of adoptable technologies by women farmers with male respondents having a mean score of 3.72 and female respondents having a 3.31 mean score followed by inadequate storage facilities with male respondents having 2.81 mean score and 2.20 for women respondents. The implication is low productivity of the farmers with uncertainty in the means of storage of available farm produce. The situation all for introduction.

Table 3: Major Constraints Associated with gender participation in Private Agricultural Extension System

Constraint Areas	Male Mean Score (x)	Female Mean Score (x)
Lack of adoptable technologies by women farmers	3.37	3.31
Inadequate Storage facilities	2.81	2.20
Poor advice from extension Agents	1.81	1.96
Inadequate teaching Communication equipment	1.77	1.67
Transportation Problem	1.73	1.55
Poor marketing outlets	1.69	1.54
Late arrival of farm inputs support materials	1.34	1.96
Complex loan acquisition requirement	1.11	1.10
Inadequate land for cultivation	1.11	1.20

Source: Field Survey, 2016

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