

The Level of Farmers Participation in the National Special Programme for Food Security

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ABSTRACT The research was carried out in Kastina Ala, Katsina Ala Local Government Area and MU in Makurdi Local Government Area of Benue State. The target population is benefiting farmers, a total of 600 farmers were included, 240 farmers were purposively selected from two sites katsina Ala and Makurdi Local Government Area. Data analysis was conducted using descriptive statistics and multiple regression analysis. The study was carried out to investigate the impact of National Special Program for Food Security amongst rural out to determine the levels of participation of farmers in the National Special programme for food security. The research also sought to ascertain strategies for improving farmers' livelihood and evaluate the effect of the program on benefitting farmers' income. Results from the research indicated that greater proportion of about 73% of the participants were involved in crop intensification techniques such as improved varieties of crops, adequate supply of fertilizers and improved agro processing techniques of gari processing. The results indicated that participants under age 30-49 were actively involved in the Food security programs. The income of 33% participants earn between ₦ 30,000- ₦ 69,000, for 20% it was between ₦ 70,000- ₦ 109,000, for 30% was ₦ 110,000- ₦ 149,000 while 16% recorded ₦ 150,000 and above per year. The study suggested that farmer's effort should be encouraged more by government, in the provision of training, input supply to enhance improved livelihood and increase food security.

INTRODUCTION

The National Special Program for Food Security strongly supports the application of participative diagnostic learning processes with the aim of empowering the farmers to articulate their demands and needs on services to become increasingly self-reliant. Participatory learning and action is a system of learning and interaction among people involved in developmental activities. The process facilitates the active involvement of farmers and ensures that their specific needs are addressed. However, there are different levels of involvement and many interpretations of participation in practice. These ranges from the lowest form referred to as passive to the highest level referred to as self mobilization (Pretty 1994). In ensuring the sustainability of agricultural programs such as the National Special Program for Food Security, it is important to move from passive and incentive driven type of participation to interactive end of the spectrum (Tope 2011).

The process enables all stakeholders to have access to information, improve accountability which promotes project survival and

clear process of learning and allows flexibility in activities.

In this vein the National Special Program for Food Security was the subject of an Independent external evaluation report in 2001/2002 which endorsed the programs approach and noted its strength as. Its promotion of national ownership of the program, the directness of its focus on agriculture, food and nutrition issues which have often been eclipsed in discussions on poverty. Use of participatory approaches for empowering households is to seek information and take decision on farming problems. The recognition of the need for reducing food insecurity approaches Food and Agriculture Organization-FAO (2010).

The design of the program is to increase rural livelihood options that will bring about increase income and improve life quality through participatory methods (Bottom-up approach) of proven accessible and efficient technologies like correct spacing and the use of hybrid varieties of crops for increase productivity. These technologies lead to increase yields of the rural and peri-urban producers, operating in groups at community level as organized specific units,

culminating into a community site. Consistency of work plans and budgets to guide operations are annuals derivable through Participatory Rural Appraisal (PRA), Need Assessment and Constraint Analysis. The constraints identifies in the participating communities will be mitigated through government assistance in cash and kind, under a cost recovery arrangement. Recovery of disbursed loans will be through active involvement of site management committees and apex leadership (Benue State Agricultural and Rural Development Authority (BNARDA) 2005).

Despite concerted efforts by various governments in Nigeria to address the food security situation and improve the living standard of the rural people, there has continued to be inadequate food production. The problem of food insecurity, especially amongst rural households is said to be prevalent in many areas across the country. The extent of food insecurity has been confirmed by the United Nation's Children Emergency Fund (UNICEF) micro nutrient survey and Participatory Rural Appraisal (PRA) study on household food security in Kano State conducted by Federal Ministry of Agriculture and Rural Development and Food and Agriculture Organization (FMARD and FAO 2001).

METHODOLOGY

Three sites, one from each of the senatorial district were selected based on the guideline provided by the stakeholders of the program Food and Agriculture Organization (FAO) Project Coordinating Unit (PCU).

The target population for this study is National Special Program for Food Security (NSPFS) beneficiaries in three pilot sites namely Katsina-Ala, in Katsina Ala Local Government Area, Mu, Makurdi in Makurdi Local Government Area and Otobi, Otukpo in Otukpo Local Government Areas in Benue State. These sites represent the three senatorial districts of Benue State. Each of the three sites is made up of 200 benefiting farmers giving a total population of 600 benefiting farmers.

Two sites viz; Katsina-Ala in Katsina-Ala Local Government Area and Mu in Makurdi Local Government Area were purposively selected. This is because; these sites have abundance of agricultural resources and favorable agro-climatic ecologies for arable crops, agro-processing and livestock production, which are the car-

dinal components of National Special Program For Food Security (NSPFS) in Benue State. Sixty (60) benefiting farmers were randomly selected from the list of benefiting farmers that make up each selected site. Sixty (60) non-benefiting farmers were randomly selected from the list of non-benefiting farmers in each of the selected site. In all, 120 benefiting farmers and 120 non-benefiting farmers made up the sample size for the study.

Multiple regression was used to determine the level of participation in National Special Program for Food Security (NSPFS). The implicit model is as follows:

$$Y = f(X_1, X_2, X_3, X_4, X_5, X_6, X_7, X_8) \dots e_i$$

Where Y = level of participation of farmers in National Special Program for Food Security (NSPFS activities

X_1 = Age of farmers (Years)

X_2 = Sex of farmer (male or female)

X_3 = Level of education (Number of years spent in school)

X_4 = Farm size (Ha)

X_5 = Household size (no. of people in household head)

X_6 = Membership of farmer's association

X_7 = Value of fertilizer used (Naira)

X_8 = Labor in mandays

RESULTS

Table 1 exhibited that about 67% of benefiting, and 41% of non-benefiting farmers were within the age bracket of 40 and 49 years. Entries in Table 1 also inform that an overwhelming majority 81% of the benefiting farmers have formal education while the remaining 22.33% non-benefiting have no formal education. Results in Table 1 displayed that 78% of benefiting respondents and 85% of non-benefiting farmers had between 5 and 8 members in their respective households.

Result in Table 2 demonstrated that the benefiting farmers participated in ten National Special Program for Food Security (NSPFS) activities in varying degree. Over 46% of the benefiting farmers participated in dry season farming 66.67%, gari processing 58.33% and groundnut shelling 46.66% activities.

Table 3 indicated that a greater proportion 73% and 58.33% of the benefiting farmers noted that they received training and education on crop intensification techniques such as improved

Table 1: Distribution of respondents according to socio-economic characteristics

Variables	Benefiting		Non benefiting	
	Frequency	%	Frequency	%
<i>Age (years)</i>				
20-29	10	8.33	24	20
30-39	30	25.00	37	30.33
40-49	42	35.00	34	28.33
50-59	26	21.67	10	8.33
60 -69	12	10.00	5	4.16
Mean age ($\bar{x}$) = 40- 45				
Total	120	100	120	100
<i>Sex</i>				
Male	80	66.77	87	72.5
Female	40	33.33	33	27.5
Total	120	100	120	100
<i>Marital Status</i>				
Single	30	25.00	20	16.66
Married	80	66.67	70	58.33
Divorced	4	3.33	10	8.33
Widow	6	5.00	20	16.66
Total	120	100	120	100
<i>Education</i>				
No formal education	36	19.00	34	28.33
Primary education non comp	3	2.50	-	-
Primary sch. complete	49	41	38	31.66
Secondary sch non comp	7	5.50	16	13.33
Secondary sch complete	32	27.00	30	25
Tertiary	6	5.00	2	1.66
Total	120	100	120	100
<i>Household Size</i>				
1-4	48	40.00	47	39.166
5-8	45	37.5	56	6.66
9-12	25	20.83	16	14.16
13- above	2	1.67	-	-
Mean ($\bar{x}$) = 6				
Total	120	100	120	100
<i>Income</i>				
N30,000-N69,000	0	33.33	37	30
N70,000-N109,000	24	20.00	30	26.34
N110,000-N149,000	36	30.00	27	22.5
N150,000-above	20	16.67	26	21.16
Total	120	100	120	100
Mean ($\bar{x}$) = 61,7167/31,4583				
<i>Farm Size (hectares)</i>				
0-0.9	4	3.33	2	1.66
1-1.9	29	24.17	12	10
2.0-2.9	31	25.83	31	25.83
.0-3.9	37	31	30	25
4.0-4.9	18	15.00	16	13.33
5.0-above	8	6.67	22	18.33
Mean ($\bar{x}$) = 2-3				
Total	120	100	120	100

varieties of crops and agro processing techniques as garri processing.

Table 4 showed that all the benefiting respondents belong to farmers' association 100%.

In Table 5 double log functional form was chosen as the lead equation on the value of multiple determination variables. Coefficient (R^2) was 0.530 indicating that 53% of the variation in

dependent variable was explained by the independent variable in the model.

DISCUSSION

In Table 1 the mean age was 40 - 45 for the benefiting respondents and non benefiting farmers. This implies that majority of the re-

Table 2: Distribution according to respondents' participation in National Special Programme for Food Security (NSPFS) activities

<i>Activity</i>	<i>Frequ- ency</i>	<i>Respon- dents</i>
Dry season farming	80	66.67
Gari processing	70	58.33
Fish Pond construction	36	30
Water Pump maintenance	30	25
Rain water harvesting	12	10
Organic fertilizer use	13	10.83
Agriculture	20	16.37
Health and Nutrition	13	10.83
Water bore sinking	19	15.83
Groundnut shelling	57	46.66

Source: Field survey
Multiple responses recorded.

Table 3: Distribution of respondents according to type of training and education received

<i>Training received</i>	<i>Frequ- ency</i>	<i>Respon- dents</i>
Crop intensification techniques	87	73
Water management	46	38.33
Livestock management	48	40
Agro processing	70	58.33
Storage	30	25
Soil Conservation	19	15.83
Fisheries	20	16.67
Mechanization	10	8.33

Source: Field Survey
Multiple responses were recorded

spondents were adults, matured and energetic to participate actively in National Special Program for Food Security (NSPFS) activity. Okurut and Bategeka (2005) described this age bracket as the "working age". The implication of this age bracket on food security is increased food production, likelihood, poverty reduction and becoming independent financially due to involvement in income generating ventures.

Findings in Table 1 also imply that National Special Program for Food Security (NSPFS) in

the study area is male dominated. Ater et al. (2008) agrees with the often held view that males dominate to decision-making process in Africa. The level of formal education of respondents as presented in Table 1 shows that the respondents have formal education. The implication of the result is that education is an important factor that might influence the ability of the respondents to properly comprehend new techniques especially in rural development programs such as National Special Program for Food Security (NSPFS). The result agrees with Imbur et al.'s (2008) assertion, which stated that improve educational level brings about positive changes in the knowledge, attitudes and skills through research and extension.

The mean household size is 6 only for benefiting and non benefiting farmers. The implication of the result on food security is that there is ready source of abundant labor. The result agrees with Iheke (2006), which stated that increasing household size is very important in farm production. Similarly, the mean annual income for benefiting farmers was N61,7167 while the mean yearly income for non benefiting farmers was N31,4583. The implication of the result is that the respondents are small scale farmers. As displayed in Table 2 benefiting farmers participated in dry season farming, garri processing, fish pond construction, water pump maintenance, rain water harvesting, organic fertilizer use, apiculture, health and nutrition, water bore sinking and ground nut shelling.

This finding suggested that a sizeable number of the respondents participated in these activities possibly because the activities addressed their needs. This is in consonance with the work of Nwachukwu (2008) which stated that participation is more than an instrument of implementing government projects; it is a development approach which recognizes the need to involve the rural population in the design and implementation of policies concerning their well-being. In Table 3, greater proportion of benefiting farmers noted that they received training and

Table 4: Distribution of respondents according to membership of farmers association

<i>Membership of farmers</i>	<i>Benefiting</i>		<i>Non-benefiting</i>	
	<i>Frequency</i>	<i>%</i>	<i>Frequency</i>	<i>%</i>
Farmers Association	120	100	40	33.3
Non Farmers Association	0	0	80	67
Total	120	100	120	100

Source: Field Survey

education on crop intensification techniques such as improved varieties of crops, agro processing techniques like garri processing, respectively. The likely reason for this development could be due to the leading role of Benue State in food production in Nigeria. However, majority of the respondents in the study area are small scale farmers who may not have enough land and interest to engage in mechanize agriculture. This research agrees with Micato (2000), stressing the importance of training and education as a tool for developing the nations' human resources as well as empowering the farmers.

Entries on Table 4 showed that all the benefiting respondents belong to farmers' association. This membership of the group gave the respondents advantage of benefiting from National Special Program for Food Security (NSPFS) small scale farmer loan facility, improved input supply and processing machines, over their counterparts who are not members of the farmers association in the study area. This is because being a member of the farmers' group means proper monitoring and management of National Special Program for Food Security (NSPFS) facilities.

In Table 5, age was significant and positively related to the level of participation while farm size, sex and marital status were significant and negatively related to the level of participation.

Age was significant at 5%. This result implies that increase in age means more vulnerability to the wind of change involving the adoption of techniques and great exposure to National Special Program for Food Security (NSPFS) activities. This conforms to a priori expectation that the respondents participate more actively in National Special Program for Food Security (NSPFS) activities when they are matured.

Education was significant and positively related to the level of participation in National Special Program for Food Security (NSPFS) activities at 5% level of significance. This implies that the more educated the respondents are, the more their participation in National Special Program for Food Security (NSPFS) activities. This conforms to the a priori expectation and corroborates with Effiong (2008) who stated that increase educational level raises human knowledge and skills to get adept in new agricultural technologies which enhance productivity.

Household size was significant and positively related to the level of participation at 5% significance. This implies that increase household size indicates a cheap and readily available source of family labor.

CONCLUSION

It has been acknowledged that National Special Program for food security is an intervention

Table 5: Regression result of the socio-economic factors that influence the level of participation

Variable	Linear	Semi-long	Exponential	Double log
Constant	-0.041 (0.036)	-16.901 (-2.639) ^{xxx}	0.248 (0.946)	-4.073 (-2.722)
Age (x_1)	-0.038 (1.937) ^{xx}	2.114 (1.931) ^{xx}	0.009 (1.931) ^{xx}	0.490 (1.917) ^{xx}
Education (x_2)	0.029 (0.682)	0.066 (0.105)	0.003 (0.295)	0.215 (1.838) ^{xx}
Farm Size (x_3)	0.073 (0.314)	0.400 (0.565)	0.008 (0.148)	-0.118 (-0.713)
Household Size (x_4)	0.191 (2.700) ^{xxx}	1.512 (2.807) ^{xxx}	0.041 (2.519) ^x	0.292 (2.321) ^{xx}
Sex (x_5)	0.026 (0.058)	0.324 (0.565)	-0.002 (-0.022)	0.124 (0.926)
Marital Status (x_6)	0.857 (-1.223)	-2.359 (-2.106) ^{xx}	0.019 (0.116)	-0.181 (-0.693)
Income (x_7)	0.034 (2.270) ^{xx}	3.253 (2.604) ^{xxx}	0.007 (1.899) ^{xx}	0.746 (2.556) ^{xxx}
R ²	0.275	0.444	0.369	0.530
R ² adjusted	0.229	0.282	0.223	0.311
F-ratio	6.062 ^{xxx}	5.609 ^{xxx}	5.883 ^{xxx}	6.016 ^{xxx}

Source: Field Survey,

Figures in parenthesis are t ratio;

^{xxx} significant at 1%, ^{xx} significant at 5%, ^x significant at 10%

by the Federal Government to empower small scale farmers to increase productivity and improve livelihood and self reliance. The strategy used was community demand driven (CDD) approach, using participatory rural approach. Research findings have suggested that 73% of the farmers in the study areas have accepted best farm practices introduced by the program. Also, socio economic factors like age, education, annual income have influence on the level of participation of the respondents. There is a direct relationship between the level of participation of farmers and the annual income variable.

RECOMMENDATIONS

The ultimate concern of the peoples' right to food is the acceptance of the right of each person to produce food. The researcher has recommended that Government, Non-governmental Organizations (NGOs) Community Based Organizations (CBOs) should continue to support all efforts regarding food production like enough funding, input supply to encourage small scale farmers to boost productivity. There should be proper integration of women into all aspect of agricultural development to enable them assume the role of self -food sufficiency and reliance in Benue and Nigeria.

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