Journal of Emerging Trends in Economics and Management Sciences (JETEMS) 6(7):291-295
© Scholarlink Research Institute Journals, 2015 (ISSN: 2141-7024)
jetems.scholarlinkresearch.com

Capacity Building Needs of Farmers for Sustainable Poverty Alleviation In Niger State, Nigeria

Umar, I.S., Ndanitsa, M. A., Ibrahim, M. and Tyabo, I. S.

Department of Agricultural Economics and Extension Technology,
Federal University of Technology, Minna

Corresponding Author: Umar, I.S.

Abstract
The study examined the capacity building needs of farmers for sustainable poverty alleviation in Niger State, Nigeria. To achieve the study objective, 375 respondents were randomly and proportionately selected from three Local Government Areas in the State. Validated interview schedule with reliability coefficient of 0.82 was used to collect data. Data collected were analyzed using descriptive and inferential statistics. Result of the study revealed that 56.00% of the respondents had no formal education, while crop (96.00%) and livestock farming (67.45%) were the predominant livelihood activities of the respondents for poverty alleviation. The mean annual income of the respondents was ₦152,436. Major areas of capacity building needs of the respondents for poverty alleviation include crop and livestock farming as well as sustainable fishing strategies. Socio-economic characteristics such as age (r=0.392), family size (r=0.312) and cooperative membership (r=0.307) had significant correlation with involvement of respondents in livelihood activities. Therefore, sensitization of farmers on diverse agricultural livelihoods was suggested to enable them obtain more opportunities for sustainable development and poverty alleviation. Also, the paper drew attention to the need to consider age, family size and cooperative membership of farmers when planning and implementing agricultural poverty alleviation programmes in the State.

Keywords: farmer, livelihood, poverty alleviation, capacity building, sustainable

INTRODUCTION

Poverty is one of the most serious problems in Nigeria today. Despite the efforts of various governments from independence to date, poverty among the people has been on the increase. Available data indicated that by 1960 the poverty level in the country covers about 15 percent of the population and by 1980 it grew to 28 percent. In 1985 the poverty level was 46 percent. By 1996 the Federal Office of Statistics estimated the poverty level in Nigeria at about 66 percent (National Poverty Eradication Programme (NAPEP), 2001). In 2004 the indices of poverty in Nigeria greatly increased to 70 percent and there are a number of real indications to show that the present poverty level has gone up (Ademola *et al*., 2011). Several reasons account for this, according to Olomola (1995) agricultural potentials are far from being fully realized and this has unpalatable implication for poverty alleviation and sustainable economic development. Unlike other sectors, agriculture plays a vital role in employment and income generation as well as in the provision of raw materials for industrial development and foreign exchange earnings. Therefore, agriculture and farmers in particular merit support for many reasons, for instance, Thirtle *et al*.(2005) and de-Janvry and Sadoulet (2010) stressed that farmers have great capacity to reduce poverty, if they are given the necessary services and support. According to them, for each percentage growth in agricultural yield, there is 0.6% to 1.2% reduction in poverty. Also, World Bank (2007) reported that Ghana reduced poverty among rural farmers by 24% between 1990 and 2005, mainly through capacity building in form of empowerment. It is the recognition of the role agriculture can play in poverty alleviation that led to its inclusion in most poverty alleviation programmes across the States of the federation.

Notwithstanding the apparent widespread of agricultural poverty alleviation programmes in States, particularly in Niger State has not yield the desired result of sustainable poverty alleviation. United Nations (2009) indicated that world agriculture in the coming 50 years will undergo far-reaching economic and physical changes of which stress on natural resources and climate change may act as constraints to supply. Similarly, Molles (2002) pointed out that the depleted state of wild fish stocks is due to overfishing and increasing degradation of coastal, marine, freshwater ecosystems and habitats. The author further stressed that growth in human populations exert increasing pressure on natural resources, changing the ecosystem via various

developmental projects without due consideration for the natural resources sustainability.Thus, the task of sustainable development and poverty alleviation in the face of depleting resources requires capacity building whereby relevant stakeholders and organizations can strengthen, create, adapt and maintain capacity over time, with the objective of assuring sustainable growth and improving the lives of the stakeholders (Eremie, 2006; Issa *et al*., 2010). While lending credence to this assertion, Illiyasu (2010) argued that capacity building strengthen institutions and improve access of farmers to services. The researcher further added that capacity building supported the development of environmental friendly, low-risk, low-cost technologies and management practices relevant to farmers. It is expected that capacity building will provide opportunities for farmers to acquire skills, put skills to productive use as well as develop good mental and physical abilities to give the maximum output for development and poverty alleviation on sustainable bases.It is against this background that this study was carried out to provide empirical research information on capacity building needs of farmers. This will likely result into formidable policy foundation block for sustainable poverty alleviation in the State and nation at large. The usage of the study's findings would be in the area of knowledge development and design of relevant capacity building strategy for sustainable development and poverty alleviation based on the need of the farmers.The specific objectives of the study are to:

i. describe socio-economic characteristics of the respondents;
ii. determine agricultural livelihood activities of the respondents for poverty alleviation.
iii. ascertain annual income of the respondents;
iv. identify areas of capacity building needs of respondents for sustainable poverty alleviation; and
v. determine relationship between socio-economic characteristics of respondents and involvement in agricultural activities.

METHODOLOGY

Niger State falls within Guinea Savanna ecological zone of Nigeria. The State lies between latitudes 8°22' and 11°30'N and longitudes 3°30' and 7°20'E. Annual rainfall of the State range from 1600mm in the south to 1100mm in the north with average monthly temperature range of about 23°C to 29°C. The major occupation of the people is crop and livestock farming (Niger State Geographic Information System, 2007). The sample design for the study was based on the agricultural activities in the State. In line with this consideration, 3 Local Government Areas (Katcha, Wushishi and Paikoro LGAs) one from each agricultural zone in the State were randomly selected. Thereafter, 3 villages were randomly chosen from each LGA to obtain 9 villages in all. Based on the population of farmers in each village, a total of 375 respondents were proportionately sampled for the study from established sampling frame of 3750 farmers.

A validated interview schedule which was subjected to Cronbach's Alpha reliability test (r=0.82) was used to collect data in February, 2014 of which age and educational level were measured in years, while cooperative membership and sex were measured in dummy and household size was measured in number. Livelihood activities were determined by asking the respondents to indicate the number of agricultural activities they partake in. Annual income was measured in naira. Capacity building needs was measured by using a 4-point Likert scale of great need =4, some need=3, little need =2 and no need = 1. In calculating the capacity building needs, the values of the scale (1+2+3+4) were summed up to obtain 10. The sum was further divided by 4 to get 2.5 which is the mean. Any area of capacity building with a mean score of 2.5 and above depicts major need of capacity building and any area with mean less than 2.5 was regarded as minor need of capacity building. The data collected for objectives 1, 2, 3 and 4 were analyzed using descriptive statistics (frequency, percentage and mean) while objective 5 was achieved using inferential statistics (correlation analysis). This study was limited to only three Local Government Areas of Niger State Nigeria.

RESULTS AND DISCUSSION

Socio-Economic Characteristics of Respondents

The result in Table 1 showed that more than half (52.00%) of the respondents were within the ages of 31-40years. This implies that the respondents are still in their active productive ages which would be instrumental to poverty alleviation and quest to build capacity. Figure in Table 1 also revealed that majority (53.34%) of the respondents had household size of 16 to 25 members. The large family size of the respondents is expected to motivate them to participate in many economic activities to alleviate poverty. In addition, Table 1 indicated that 73.87% of the respondents were male while 26.13% were female. Similarly, Table 1 revealed that 54.14% of the respondents were members of cooperative societies and the remaining 45.86% were not members. Furthermore, Table 1 showed that majority (56.00) of the respondents had no formal education. This low educational status may pose serious problems that may affect farmers' capacity building. In buttressing this point, Umar *et al*. (2009) stressed that acquisition of formal education is necessary for every person in respective of occupational profession.

Table 1: Socio-economic characteristics of respondents

Socio-economic characteristics	Frequency	Percentage
Ages(Years)		
21-30	75	20.00
31-40	195	52.00
41-50	42	11.20
51-60	36	9.60
61 and above	27	7.20
Total	375	100.00
Household size		
1-5	40	10.66
6-10	45	12.00
11-15	90	24.00
16-20	100	26.67
21-25	100	26.67
Total	375	100.00
Sex		
Male	277	73.87
Female	98	26.13
Total	375	100.00
Cooperative membership		
Yes	203	54.14
No	172	45.86
Total	375	100.00
Educational status		
No formal education	210	56.00
Primary education	90	24.00
Secondary education	55	14.67
Tertiary education	20	5.33
Total	375	100.00

Source: Field survey, 2014

Agricultural Livelihood Activities of Respondents for Poverty Alleviation

Table 2 indicated that crop sub-sector constitutes the most dominant agricultural activity of the respondents in the area for poverty alleviation. This is evidenced by the involvement of overwhelming majority (96.00%) of the respondents in crop farming. Livestock farming was next with 67.45% respondents. Moreso, 50.13% of the respondents practiced fishing in the wild rivers. In a related study, Haylor and Bland (2001) reported that integration of fisheries to other forms of livelihood in some communities in Asia resulted in income increase and better livelihood. Similarly, 41.60% of the respondents partake in animal traction business. In rural communities in Nigeria where alternative source of income generation outside farming are usually scarce, empowering more farmers to acquire traction animals would contribute to poverty alleviation in the study area. However, only 16.00%, 10.13% and 9.07% of the respondents, respectively, engaged in food processing, aquaculture and apiculture which is attributed to lack of capacity building in terms of productive asset. Consequently, the respondents are failing to utilize these agricultural opportunities to their advantage. Potentially, food processing and apiculture provides a lot of opportunities for farmers to earn a meaningful livelihood in agriculture for sustainable economic development and poverty alleviation. Thus, productive asset provision component of capacity building must be addressed for sustainable development and poverty alleviation in the area.

Table 2: Agricultural livelihood activities of respondents for poverty alleviation

Agricultural livelihood activities*	Frequency	Percentage
Livestock farming	253	67.45
Marketing of agricultural products	124	33.07
Food processing	60	16.00
Farm labour business	136	36.27
Aquaculture	38	10.13
Animal traction business	156	41.60
Crop farming	360	96.00
Forestry product business	77	20.53
Apiculture	34	9.07
Agro-input dealer	25	6.67
Fishing	88	50.13

Source: Field survey, 2014

*Multiple responses

Annual Income of Respondents

Table 3 showed that the annual income of 35.46% of the respondents ranged between ₦100,000 and ₦200,000, while additional 32.27% of the respondents realized between ₦201,000 and ₦300,000 as income. The mean annual income of the respondents was ₦152, 436 which is an indication that majority of the respondents are low income earners. When the mean amount is converted to US dollar, it is equivalent to $896.68 which is a pointer that most of the farmers in the study area are living below the poverty line i.e. living on less than $2.50 a day. Capacity building in this regard should emphasis on provision of marketing information and basic infrastructural facilities such as construction of road networks and markets for easy transportation and marketing of agricultural produce from rural to urban centres to earn more income for sustainable development and poverty alleviation.

Table 3: Annual income of respondents

Income (₦)	Frequency	Percentage
< 100,000	85	22.67
100,000 - 200,000	133	35.46
201,000 - 300,000	121	32.27
Above 300,000	36	9.60
Total	375	100.00
Mean	₦152,436($896.68)	

Source: Field survey, 2014

Capacity Building Needs of Respondents for Sustainable Poverty Alleviation

The mean values of 3.70 and 3.34 respectively, revealed that most of the respondents are in need of capacity building in the areas of crop and livestock farming in order to increase production and alleviate poverty (Table 4). Similarly, the mean figure of 3.27 implies that the respondents are in need of capacity building on sustainable fishing strategies to reduce the

overexploitation of natural stock, which the respondents stressed, is getting to its limit. These areas was followed by climate change (3.15); which suggests that the respondents are in need of capacity building on climate change adaptation strategies for sustainable production and poverty alleviation. Other areas of capacity building needs were food processing (3.03), aquaculture (2.63), sustainable forest product utilization (2.58) and apiculture (2.51). Attending to these areas of needs will go a long way in building farmers' capacity for improved production and sustainable poverty alleviation among farmers in the study area.

Table 4: Capacity building needs of respondents for sustainable poverty alleviation

Capacity building needs	Mean	Remark
Livestock farming	3.34	Major need
Food processing	3.03	Major need
Aquaculture	2.63	Major need
Crop farming	3.70	Major need
Marketing of product	1.69	Minor need
Sustainable forest product utilization	2.58	Major need
Apiculture	2.51	Major need
Animal traction business	2.26	Minor need
Climate change	3.15	Major need
Agro-input business	1.72	Minor need
Sustainable fishing strategies	3.27	Major need

Source: Field survey, 2014

Relationship between Socio-economic Characteristics of Respondents and Involvement in Agricultural Activities for Poverty Alleviation

As shown in Table 5, age (0.392), family size (0.312) and cooperative membership (0.307) had significant correlation with involvement of respondents in agricultural activities; indicating that one unit increase in these socio-economic variables will lead to involvement of farmers in more agricultural activities in order to alleviate poverty. Involvement of farmers in social organizations especially cooperative societies could enhance reception of government assistance in form of loans, subsidies and other services. It also provide forum for capacity building. In an earlier study, Olomola (1995) reported that one of the most important factors determining the level of involvement of farmers in agricultural livelihood activities is the size of family.

Table 5: Relationship between socio-economic characteristics of respondents and involvement in agricultural activities for poverty alleviation

Socio-economic characteristics	Correlation values
Age	0.392*
Family size	0.312*
Sex	0.189^{ns}
Cooperative membership	0.307*
Educational status	0.0.182^{ns}

Source: Computed from field survey data, 2014
*Significant at 5% NS: Not significant

CONCLUSION

Based on the findings, it was concluded that crop and livestock farming was the common livelihood activities of the respondents for poverty alleviation. The annual mean income from livelihood activities of the respondents was N152.436. While major areas of capacity building needs of the respondents for sustainable poverty alleviation include crop, livestock and fish farming. Age, family size and cooperative membership had correlation with involvement of respondents in livelihood activities.

RECOMMENDATIONS

Sensitization of farmers on diverse livelihood activities should be carried out to enable them obtain more opportunities for sustainable development and poverty alleviation. Specifically, more emphasis should be given to food processing, aquaculture and apiculture.

Finding revealed that animal traction business is an alternative source of income generation for poverty alleviation. Thus, farmers should be empowered. This could come in form of loans through the State's Poverty Alleviation Programme. To facilitate this, farmers should be encouraged to form viable association through which traction animals could be made available. Capacity building strategy in the area of crop and livestock farming would involve provision of improved crop varieties and animal breeds. To enhance farmers' access to improved crop varieties, communities and associations should be encouraged to establish their own seed farms while the government offers them the necessary technical support.

Education and information dissemination is crucial to sustainable development. Therefore, capacity building strategy for fishing should focus on creating awareness on sustainable fishing strategies such as none use of explosives, poisons and compliance with gear control, declaration of fish catch and closed area/season regulations. Also, marketing information and skills needed for aquaculture, fisheries, forest product utilization and climate change management should be disseminated. This could be achieved through demonstration by skilled extension workers who should pay on-farm visit to the farmers regularly.

To build farmers capacity for more productivity for sustainable development and poverty alleviation in the area, government, non-governmental organisations and even patriotic citizens should embark on provision of relevant productive assets and infrastructural facilities. Given the poverty level of the farmers, the productive assets and technologies should be provided as loans at highly subsidized prices.

Finally, age, family size and cooperative membership of the farmers should be considered when planning and implementing any agricultural poverty alleviation programme in the State.

BIOGRAPHY

The lead author was born in 1972 in Niger State, Nigeria. He obtained first, second and third degrees in 1997, 2006 and 2013, respectively in Agricultural Extension and Rural Development. Since 2001, he has being teaching in Federal University of Technology Minna, Niger State, Nigeria. He is married with children.

REFERENCES

Ademola, A.L., Olusola S.F. and Titilola, R.S. (2011). An assessment of household poverty status in selected local government areas of Lagos State, Nigeria. In: Madukwe, M.C. (eds). Agricultural Extension Education and the Attainment of MDGs: Challenges and Opportunities. *Proceedings of 16th Annual National Conference of Agricultural Extension Society of Nigeria*, held at BUK 21-24 March, Pp1-149.

de - Janvry, A. and Sadoulet, E. (2010). Agricultural growth and poverty reduction: Additional evidence. *The World Bank Research Observer*, 25 (1): 1-20.

Eremie, S. (2006). Capacity building in agricultural extension: The World Bank Experience in Nigeria. *Journal of Agricultural Extension*, vol. 9: 1-7.

Haylor, G. and Bland, S. (2001). Integrating aquaculture into rural development in coastal and inland area.In Aquaculture in the Third Millennium.Subasinghe, R.P., Bueno, P., Phillips, M.J., Hough, C., Mcgladdery, S.E. and Arthur, J.E.(eds.). *Technical Proceedings of the Conference on Aquaculture in the third Millennium, Bangkok, Thailand*.20-25 February 2000. NACA Bangkok and fao, rome., 471pp. www. fao. org/DOCREP/003/AB412E/ab412e3i.htm.

Illiyasu, Y. (2010). Strengthening communities through capacity building. *Agriculture, Business and Technology Journal*, 8 (1): 173-180.

Issa, F.O., Auta, S.J. and Jaji, M.F. O. (2010).An overview of the challenges of agricultural extension practices, capacity building and sustainability.*International Journal of Agricultural and Rural Development* (IJARD). 1 (2): 51-58.

Molles, M.S. (2002). Ecology: Concept and Application. Boltom, McGraw Hill. Pp.585.

National Poverty Eradication Programme NAPEP. (2001). Report booklet on Conception, Implementation, Coordination and Monitoring.Pp.1-51.

Niger State Geographic Information System (2007).Background information.Retrieved on April 4, 2013 from www.nigerstate.com/about-nigerstate.

Olomola, A. S. (1995). Source of growth and performance trend in Nigeria. Agriculture 1960-1992. In Ikpi, A.A. and Olayeme, J.K. (eds). Sustainable Agricultural and Economic Development in Nigeria.Winrock International Institute for Agricultural Development Arlington, Pp 43-56.

Thirtle, C., Piesse, J. and Irz, X. (2005). Governance, agricultural productivity and poverty reduction in Africa, Asia and Latin America. In Cotton Natural Resources and Society Sub-Saharan Africa., Mosley, W.G. and Gray, L. C. (eds). Oxford University Press, Oxford, UK.

Umar, S.I., Ndanitsa, M.A. and Olalaye, S.R.(2009). Adoption of improved rice production technologies among youths farmers in Gbako Local Government Area, Niger State. *Journal of Agricultural Extension*, 13 (1): 1-8.

United Nations (2009). World Population Prospect: the 2008 revision, United Nations, New York.

World Bank (2007). World Development Report. *Agriculture for Development*. The World Bank, Washington, D. C