

Participatory assessment of the impact of Women in Agriculture Programme of Borno State, Nigeria

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Abstract

This study assessed the impact of the Women in Agriculture (WIA) programme of Borno State, Nigeria. Primary data were collected using a structured questionnaire administered to 90 WIA participants selected through a multistage sampling process. Results indicate that 52% of the respondents were within the age range of 31 to 40 years and about 90% were married. Some 52% of the women farmers had at least primary education and 34% had farming experience ranging from 16 to 20 years. Average family size of the respondents ranged between 5 and 10. Although the WIA programme has led to an increase in agricultural production and income level of the participants, correlation analyses showed a negative relationship between marital status and agricultural production level ($r = -0.26; p=0.01$). This study recommends sustained governmental assistance to women farmers in the form of appropriate policies and strategies to ensure their access to extension services, land resources, credit, and subsidized inputs. Also, the WIA programme should include more income generating activities and training for improved production.

Keywords: Socioeconomic characters, Agricultural resources, Extension services, Gender relations.

Introduction

Women play a significant role in agriculture, the world over. About 70% of the agricultural workers, 80% of food producers, and 10% of those who process basic foodstuffs are women and they also undertake 60 to 90% of the rural marketing; thus making up more than two-third of the workforce in agricultural production (FAO, 1985). In West Africa, up to 80% of the labour force in all trade is female. Yet, the role of women in these activities, so important economically, has remained obscure for long because women seldom played any major roles in political activities or decision-making processes (Spore, 1993). Despite the fact that women produce much of the food in the developing world, they also remain more malnourished than most men are. In many rural societies, women eat less food than men do, especially when the food is scarce, such as just before the harvest, or when the workload

increases without a corresponding increase in the food intake (Roodkowsky, 1979).

Generally, development assistance has failed to reach women in the rural areas, both in absolute and relative terms compared to men, for two reasons: (1) agricultural development programmes were traditionally focused on men as *producers* and (2) a lack of knowledge or a false assumption about the role of women in agriculture (BOSADP, 2002). Furthermore, the new farming methods and machinery made available to men caused a shift in the cropping pattern with potential adverse impacts on food diversity and nutrition of the family, besides aggravating gender inequality. The Women in Agriculture (WIA) programme in Nigeria was designed to address the gender imbalance in extension delivery. The programme evolved from three pilot projects to a nation-wide programme, which is now central to the Nigerian government's agricultural development strategy.

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The World Bank played a catalytic role in this process and its Executive Board has recommended WIA as a model for developing and delivering extension services to women farmers, as well as developing an effective and relevant extension service involving government, donors, and the farmers (BOSADP, 2002). Essentially, the WIA programme provides inputs and training to the women farmers, besides mobilizing them to achieve higher agricultural productivity. Although WIA programme has been in existence since 1989 in the Borno state, there has been no systematic effort to assess the performance especially from the participant's perspective. This study was carried out to determine the impact of WIA as perceived by the women farmers. Other objectives included identifying the socioeconomic characteristics of the women farmers in Borno state and the constraints in implementation of WIA.

Methodology

The study was conducted in Borno state, which is located in the northeastern part of Nigeria (11°N; 13.5°E). It is one of the largest states in the federation with an area of 69,436 km². As per the 1991 census, Borno has a population of 2,596,589 with 1,296,111 males and 1,239,892 females (National Population Commission, 1992). The Borno State Agricultural Development Programme (BOSADP) has three agricultural zones with headquarters in Biu, Bama, and Kukawa (Zone 1, 2 and 3 respectively). Two of these were chosen for the study, in view of their population density and agricultural activities.

The sampling strategy involved a multistage process. In the first stage, zones 1 and 2 were selected and in stage 2, three local government areas (LGAs) from each zone were selected. From each of the six LGAs, 15 contact women farmers participating in the WIA programme were randomly selected ($n=90$). Primary data were collected using a questionnaire survey and secondary data obtained mainly from the quarterly and annual reports of WIA (BOSADP, 2002). Both descriptive (frequency and percentage) and inferential statistics (correlation) were used for analysis and interpretations.

Results and Discussion

Socioeconomic characteristics of women farmers

The socioeconomic characteristics of the women farmers are presented in Table 1. A comparison of the data indicates that 52% of the women farmers were within 31 and 40 years. Respondents within the range of 20 to 30 years constituted 19%, while those within 41 to 50 years of age were 28%, and those over 50 were only about 1%. Implicit in these findings is that a large proportion of the respondents was middle-aged and able-bodied, and can, therefore, be regarded as active, agile, and physically disposed to pursue economic activities. Similarly, 90% of the respondents were married, implying that their occupational role in the family as mothers and home-

Table 1. Socioeconomic characteristics of the participants of the Women in Agriculture (WIA) programme of Borno state, Nigeria.

Variable	Frequency ($n=90$)	Percentage (%)
Age (years)		
20 to 30	17	19
31 to 40	47	52
Above 50	25	28
Marital status		
Married	81	90
Single	6	7
No response	3	3
Family size (number of children)		
Under 5	5	6
5-10	47	52
Above 10	10	11
No response	28	31
Level of education		
No formal education	26	29
Adult education	3	3
Primary education	47	52
<i>Quranic</i> education	5	6
Secondary/teachers' college	7	8
National diploma	2	2
Farming experience (years)		
Under 5	24	27
6 to 10	9	10
11 to 15	20	22
16 to 20	31	34
Above 20	6	7

makers did not clash with participation in WIA, because the WIA activities were generally scheduled during the spare times. Table 1 also reveals that 52% of the respondents had 5 to 10 children. This finding shows that women who participate in the WIA programme have relatively large families. This large family size probably necessitated them to learn new agricultural technologies for augmenting production and increasing returns.

The educational levels of the respondents indicate that most of the participants were “fairly” educated. The fact that majority of the women farmers in this study had some formal education is an advantage since education is generally considered as an important variable that enhances the farmers’ adoption of new technologies (Olawoye, 1994). Most respondents also have had many years of practical experience on farming.

For example, 34% had 16 to 20 years of farming experience. This made them familiar with the improved practices, which in turn, exerted a positive impact on the production process and adoption of new technology.

Expectation of respondents for participating in the WIA programme

Accessing extension services was the primary objective for about 90% of the women participants of WIA (Table 2). This shows that the respondents are aware of the need for scientific information to increase crop productivity. More often than not, extension services are targeted towards men, assuming that agricultural messages given to men will trickle down to their wives, which, however, did not occur widely (Olawoye, 1994). Only 9% joined the WIA programme in order to get access to farm inputs

Table 2. Response of the participants of the Women in Agriculture (WIA) programme of Borno state, Nigeria.

Variable	Frequency	Percentage
Reasons for participation in WIA (n=83)*		
Financial assistance	1	1
Access to extension services	84	90
Access to farm inputs	8	9
Living standards of respondents’ families (n=90)		
Participation had positive impacts on family living standards	88	98
Participation did not have any influence on family living standards	2	2
Access to farm resources through participation in WIA (n=83)*		
Agrochemicals	1	0.5
Cockerel exchange programme	2	1.0
Pot-in-pot technology	16	8.0
Improved seeds/seedlings	26	13.1
Tractor hiring	1	0.5
Irrigation pumps	1	0.5
Training opportunities	1	0.5
Market outlets	4	2.0
Processing technologies	73	36.7
Improved farming techniques	1	0.5
Cooperative society	72	36.2
Government support	1	0.5
Respondents’ assessment of their agricultural production after joining WIA (n=90)		
Great improvement	70	78
Little improvement	18	20
No improvement	2	2

*Multiple responses, hence total frequency is more than the sample size of 90 and the percentage more than 100.

and 1% to obtain financial assistance. Table 2 also shows that a vast majority (98%) of the women farmers perceived that WIA had a positive impact on the families' living standards; 2%, however, indicated otherwise. This is consistent with the findings of Oladoja (2004), who observed that aside from equity, the most important benefit of gender-sensitive agricultural development is that it will ensure higher level of beneficiary participation, greater impact, and sustainability.

It is clear from the data presented in Table 2 that about 37% of the respondents indicated they had easy access to processing technologies because of their participation in WIA. Other resources available to the WIA participants are improved seeds/seedlings (13%), *pot-in-pot* technology (8%), and membership of cooperative societies (36%). Most of the women farmers (78%) also indicated that agricultural production greatly increased because of their participation in WIA, while 20% believed that there was some improvement in their agricultural production activities, and only 2% thought that there was no improvement (Table 2). The analysis implies that encouraging women to participate in the WIA programme is one of the most effective ways of increasing agricultural production in Borno state as well as for improving the income and living standards of women. Agricultural productivity of women farmers before and after participating in the WIA programme as well as income from livestock and crop production emphasis were, however, weakly correlated with the

socioeconomic variables such as age, marital status, family size, educational qualification, and years of farming experience. The only significant relationship emerged was between marital status of the respondents and their crop and livestock production enterprises ($r=-0.263$).

Constraints limiting activities of WIA programme as perceived by the participants

The constraints commonly cited by the women farmers as limiting their participation in the WIA programme activities are the inadequacy of inputs (e.g., farm tools, fertilizers, agrochemicals) especially in rural areas, and the high costs wherever these are available. This in turn, calls for ensuring sustained availability of these inputs in the rural areas. It will enhance the ability of the women farmers to adopt modern technologies. Previously, Nasiru et al. (2004) also reported that extension packages should be backed with adequate input supplies and the government should subsidize the cost of such inputs. Another problem indicated by the women farmers is the inadequate funding for the WIA programme. Based on the findings of this study, it can be concluded that the WIA programme had a positive impact on the standard of living of the participants' and their family members. This study also recommends a sustained governmental assistance to women farmers, through provision of appropriate extension services and inputs at subsidized rates.

Table 3. Correlation (r) between socioeconomic characteristics of the women farmers and agricultural production before and after participating in Women in Agriculture (WIA) programme of Borno state, Nigeria.

Socioeconomic characteristics of the women farmers	Production level (r)		Income from livestock Production (r)		Income from crop Production (r)	
	Before	After	Before	After	Before	After
Age of respondents	0.034	-0.104	-0.159	0.159	-0.016	0.032
Marital status	-0.148	-0.263**	0.109	0.144	-0.007	-0.073
Family size	-0.101	-0.108	0.072	-0.006	0.029	-0.053
Educational qualifications	-0.056	-0.040	0.123	0.059	0.087	-0.045
Years of farming experience	-0.126	-0.249	-0.115	-0.006	-0.163	-0.136

** Significant at 1% level.

References

- BOSADP, 2002. *The Women in Agriculture Programme*. A paper presented at a seminar in Maiduguri. Borno State, Nigeria (unpublished).
- FAO, 1985. *Women in Developing Agriculture*. Human Resource Institution and Agrarian Reform Division. Rome, 64p.
- Nasiru, M., Abdurrahman, S., and Bala, O. 2004. The extension delivery on off-farm technologies to women farmers under the National Agricultural Technical Support Project in Bauchi State. *Proc. Ninth Annual Conf. Agric. Extension Soc.*, Nigeria, Obafemi Awolowo University, Ile-Ife, Nigeria, pp 54–57.
- National Population Commission 1992. *National population census 1991*. Abuja Nigeria 12p.
- Oladoja, M.A., Akinbile, L.A., and Adisa, B.O. 2004. Gender analysis of access to extension services by farmers in Ago-Iwoye Enclave. *Proc. Ninth Annual Conf. Agric. Extension Soc.*, Nigeria, Obafemi Awolowo University, Ile-Ife, Nigeria, pp 66–69.
- Olawoye, J. 1994. Gender priorities and issues in agricultural extension in Nigeria. *Proc. Ninth Annual Conf. Agric. Extension Soc.*, Nigeria, Obafemi Awolowo University, Ile-Ife, Nigeria, pp 23–27.
- Roodkowsky, M.L. 1979. *Women in Agriculture*. Information Division of FAO, Rome, 43p.
- Spore, 1993. *A women's rightful place*. Technical Center for Agricultural and Rural Cooperation (CTA). The Netherlands, 65p.