Training needs of rural women in agriculture in Delta and Edo States of Nigeria

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ABSTRACT

The purpose of this study was to identify training needs of rural women in agriculture in Delta and Edo States of Nigeria to improve their indigenous scientific knowledge and skills for a sustainable agricultural production. Their traditional crop production techniques were surveyed under the following three headings: (i) on-farm activities, (ii) off-farm activities, and (iii) miscellaneous activities. Skill areas were identified and the rural women were interviewed to find out areas of training needs. Three major farming communities, Abavo, Urhonigbe and Abraka, formed the study area, from where 30 women were selected from each community for interview. Results showed that over 82 per cent of the rural women needed training in planting, post-planting, and processing activities. The percentage of rural women that expressed training needs in credit procurement techniques was 68.5 per cent, while 62 per cent wanted skills in preservation and storage techniques. Also, a high percentage of the women needed skills in multiplication of planting materials; for example, seed yams and cassava cutting (76.8%). Prospects of using mechanised equipment (e.g. tractors) were rendered impossible by the communal land ownership patterns in these communities. Based on the results, it was recommended, among others, that women agriculturalists or extension agents should be used to educate the rural women on the various areas of training needs to enhance productivity.

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RÉSUMÉ

IKEOJI, C. N.: *Les besoins de formation des femmes rurales dans l'agriculture des régions Delta/Edo du Nigéria.* Le but de cette étude était d'identifier les besoins de formation des femmes rurales dans l'agriculture des régions Delta/ Edo du Nigéria comme un moyen d'améliorer leur connaissance indigène scientifique et leur compétences pour la production agricole viable. Une enquête de leur techniques de la production des cultures traditionnelles était conduite sous les trois titres suivants: (i) activités sur le champ, (ii) activités hors du champ, et (iii) activités de miscellanées. Les domaines de compétence étaient identifiés et les femmes rurales étaient interviewées pour s'assurer de domaines des besoins de formation. Trois communautés majeures d'agriculture – Abavo, Urhonigbe et Abraka constituaient le domaine de l'étude, d' où 30 femmes étaient choisies de chaque communauté pour l'interview. Les résultats révélaient que plus de 82% de femmes rurales avaient besoin de formation en plantation, en postplantation et en activités de traitement. Environ 68.5% de femmes rurales ont exprimé les besoins de formation en techniques d'obtention de crédit, alors que 62% voulaient des compétences en préservation et en techniques de stockages. En plus, un pourcentage élevé des femmes avaient besoin de compétences en multiplication végétative des matières de plantation par exemple l'igname de semence et la bouture de manioc (76.8%). La possibilité d'utiliser l'équipment de mécanisation par exemple les tracteurs, était rendu impossible par la structure de possession agraire communautaire dans ces communautés. Basée sur les résultats il était recommandé entre autres que les agricultrices ou les agents de vulgarisation doivent être utilisés pour former les femmes rurales sur les différents domaines de besoins de formation pour améliorer leur productivité.

Introduction

Few years back, some African countries adopted National Environmental Plans of Actions (NEPA) aimed at integrating environmental concerns into economic and social development of a country (UAPS, 1997). This is related to the Federal Environmental Protection Agency (FEPA) established in Nigeria for similar purposes. Furthermore, one of the aims of the 1994 Women in Agriculture Conference was to address production, environmental, economic and social issues affecting agriculture nationally and internationally.

However, the key issue in most international conferences in the 1980s and 1990s revolved around women and their participation in agriculture (Sadik, 1991; McCaughey, 1994; Malize, 1997; Onuoha & Nnadi, 1999). Women have been recognised as vital assets in the farms and farm families (Kandiyoti, 1985). West African women play significant roles as farmers, traders and entrepreneurs, and these roles are of central importance to the women, their families and the economies of West Africa (Simmons, 1976). Outtara (1994) has also noted that the agricultural sector remains the most important sector of the African economy, engaging between 70 and 80 per cent of the active population, which is essentially rural. McCaughey (1994) reports that up to 80 per cent of women are engaged in agriculture, and women produce over 50 per cent of all food produced in developing countries.

The knowledge and skills used by the farming population, essentially women, are mainly their traditional, indigenous skills because most of them hardly had any formal education. In parts of Delta and Edo States of Nigeria, over 70 per cent of farmers are rural women and girls engaged in a variety of farming activities ranging from clearing to marketing and storage of food products. Bryson (1981) noted that more women than men in traditional cultivator families do more agricultural work, and usually work more hours per week. They are found to do 70 per cent in all cases and in some 80 per cent of the total work, while most males here (including husbands and boys) are often found in groups in drinking houses discussing village politics. Moreover, socio-cultural factors in these parts of Delta and Edo States place more burden on the women concerning catering for husbands and children. The major foods produced in this area are yam, cassava, plantain and maize.

Unfortunately, attaining food security is still a far cry in this area because hunger is still prevalent. Food security, as defined by the World Bank (1998), is the access of the population of a country to enough food for an active and healthy life all the year round.

Women need agricultural education to fulfil and develop their roles, and also in the interest of equity and recognition for the work they do. Fairbaim-Dunlop (1994) suggests that a cohesive, balanced, long-term system must be started to enable women farmers to access the type of education they need.

This paper, therefore, recognises the urgent need to equip these rural women with modern scientific skills and knowledge to enhance their productive capacities and reduce drudgery. It is also expected that they should be educated to apply environmentally friendly techniques to ensure a sustainable development and maintain our environment.

In pursuance of the identified problems, this study aims at:

- identifying the training needs of these rural women in agriculture in Delta and Edo States of Nigeria in food production and post-harvest activities; and
- recommending strategies that can improve their productive capacities based on the results of the study.

Materials and methods

An interview schedule was used to collect data from the respondents who were 90 rural women farmers, with 30 each from Abavo, Urhonigbe and Abraka in Delta and Edo States. Traditional crop production techniques and post-harvest handling

of farm produce were studied. The women were asked to indicate their preferred training needs and modes and major problems met in all their farm-related activities. Skill blocks were categorised into (i) on-farm activities (11 activities), (ii) off-farm activities (7 activities), and (iii) miscellaneous activities (9 activities). The respondents were first required to grade each farm activity according to how important they regarded it thus: HI = Highly Important (5), MI = Moderately Important (3), and NI = Not Important (1). Where the farm activity does not often apply, they were requested to respond NA = Not Applicable. They were also to indicate where training was needed, and whether it was important. These were collated and means and percentages were used to describe the result. TND (Training Needed) was indicated when above 50 per cent of the respondents needed training, while TNN (Training Not Needed) was used when the proportion fell below 50 per cent. Also, HI was indicated when the mean was between 3.51 and 5.0, MI when the mean was between 2.1 and 3.50, while NI was used when mean score was between 1.0 and 2.0.

Data were collected by the researcher and two other assistants. The results and conclusions were based on analysis of the 90 responses.

Results

The results of the 27 activities in the on-farm, off-farm and miscellaneous activities (Table 1) were grouped according to close relationship into pre-planting, planting, post-planting, processing, and other activities (a - e) for presentation. Tables 2 and 3 present the type of training needed and the free response categories.

a) *Pre-planting activities*. These were represented by Items 1-5 and 11. Although the major mode of clearing in these communities was wild bush burning, the respondents still saw bush burning and burning of trash as highly important (4.12 and 4.14). Training was needed in bush clearing (56.7%) and preparation of planting materials (76.8%). Raking of trash and ridge and mound-making were rated not important (1.60 and 1.25) and did not require training. The two activities were found not to be adopted in the study area. The respondents agreed that their production was good enough without those activities.

b) *Planting and sowing*. Planting and sowing activities were rated highly important and 82.5 per cent of the respondents needed training here.

c) *Post-planting activities*. These activities were represented by Items 7-10. Weeding, staking, and harvesting were rated highly important (4.63, 4.37 and 4.66), while fertiliser or manure application was of moderate importance (2.98). The respondents had not felt the need for manure or fertilisers, because they were satisfied with their production. However, they needed training in all the four activities (83.9, 85.2, 76.1 and 87.3%).

d) *Processing activities*. Much of the processing activities in the study area was in cassava. They agreed that although cassava processing was tedious and time-consuming, the product (mainly *garri)* attracted low price. The activities were rated highly important (3.94, 3.98, 4.00, and 4.45) and training was needed in the processes (82.7-88.0%). Preservation of planting materials was rated highly important (4.33) and training was needed (65.6%).

e) *Others*. Other activities included storage, land procurement, and credit or subsidy procurement. Items 16, 17, 19, 24 and 25 (namely storage activities, yam storage, land procurement, obtaining information relevant to farming and women cooperative societies, respectively) were rated of moderate importance and training was needed in all (72.7, 58.4, 51.0, 56.2, and 61.5%). Transportation of materials to and from farm, marketing of produce, procurement of credits or subsidies, other input procurement and savings against future productions (Items 20-23 and 26, respectively) were all highly

TABLE 1

Training Needs Identified by the Women (N = 90)

Activity		*HI (5)*	*MI (3)*	*NI (1)*	*NA*	*Remark*	
						TND%	*TNN%*
On-farm activities							
I.	Bush cutting	4.12	-	-	-	56.7	43.3
2.	Burning of trash	4.12	-	-	-	15.4	84.6
3.	Raking of trash	-	-	1.60	-	14.8	85.2
4.	Ridge/mound making	-	-	1.25	-	21.0	79.0
5.	Making of holes for planting	3.92	-	-	-	18.6	81.4
6.	Sowing/planting	4.25	-	-	-	82.5	17.5
7.	Weeding	4.63	-	-	-	83.9	16.1
8.	Staking (yams)	4.37	-	-	-	85.2	14.8
9.	Fertiliser/manure	-	2.98	-	-	76.1	23.9
10.	Harvesting of products	4.66	-	-	-	87.3	12.7
11.	Preparation of planting materials e.g. cutting sets	4.35	-	-	-	76.6	23.2
Off-farm activities							
12.	Peeling of cassava tuber	3.94	-	-	-	84.5	15.5
13.	Grating of cassava tuber	3.98	-	-	-	82.7	17.3
14.	Fermentation of grated cassava	4.00	-	-	-	85.9	14.1
15.	Frying of dry cassava mill (*garri* frying)	4.45	-	-	-	88.0	12.0
16.	Storage activities	-	2.92	-	-	72.7	27.3
17.	Yam storage (in barns or bush)	-	2.92	-	-	58.4	41.6
18.	Preservation of planting materials	4.33	-	-	-	65.6	34.4
Miscellaneous activities							
19.	Land procurement	-	3.22	-	-	51.0	49.0
20.	Transportation of materials to and from farm	4.21	-	-	-	43.5	56.5
21.	Marketing of produce	3.89	-	-	-	68.5	31.5
22.	Procurement of credit/subsidies	3.89	-	-	-	68.5	31.5
23.	Other input procurement, e.g. fertiliser, herbicides	3.91	--	-	-	68.8	31.2
24.	Obtaining information relevant to farming operations	-	3.10	-	-	56.2	43.8
25.	Women cooperative societies	-	3.25	-	-	61.5	38.5
26.	Savings against future productions	3.90	-	-	-	72.4	27.6
27.	Tractor-hiring for jobs	-	-	-	NA	40.9	59.1

TABLE 2

Preferred Training Modes (N = 90)

Type of training	*No. of respondents*	*Percentage*
Regular school training in schools	5	6
Informal school training by weekends	14	16
On-site demonstration/discussion	62	68
Radio/TV programmes	9	10
Total	90	100

TABLE 3

Major Problems Encountered by Respondents (N = 90)

Problem	*No. of respondents*	*Percentage*
Cost of hiring labour for bush clearing is high	21	23.3
Cost of leasing land is too expensive	18	20.0
Women have no rights to own land	15	16.7
Can't hire tractor due to smallholdings	8	8.9
Staking materials are becoming expensive	7	7.8
Low price of produce is discouraging	7	7.2

Problems listed were those occurring more than once

important. The respondents did not need much training in transportation of materials to and from farm. However, training was needed in Items 21- 23 and 26 (53.6, 68.5, 68.8, and 92.4%). Item 27, which was on tractor-hiring, was not applicable, because the respondents never engaged such services for their routine operations.

Discussion

A total of 90 rural women farmers from Abavo, Urhonigbe and Abraka were interviewed. A variety of farming activities were recognised as highly important in the whole process of production, while others were not so important. Although activities such as raking of trash, ridge or mound-making were regarded as not being very important, they were those activities considered very decisive in some other localities.

The two most important groups of activities in which respondents expressed the need for training were planting and post-planting. The respondents were aware of improved methods in the various activities, which used scientific technologies to reduce drudgery and improve productivity. As McCaughey (1994) notes, the need is to build on the individual resourcefulness, spirit and ingenuity of rural people; especially rural women with their capacity to innovate, to think laterally, and to win through seemingly impossible situations with rugged determination. However, the relatively low importance and lower proportion needing training in applying and using fertiliser was quite obvious. The communities studied did not see the need for fertilisers because they were quite satisfied with their production, especially for cassava and yam. They probably did not realise that the yield could be better.

Another group of off-farm activities in which they needed training was processing, credit procurement techniques, and marketing of farm produce. The respondents spent much of their time in processing and marketing activities, yet their incomes remained low. Credit procurement is popularly through borrowing from village moneylenders or societies and associations that make regular contributions. Such credits are secured at high interest rates. Fairbaim-Dunlop (1994) opined that any development in this direction should recognise the traditional way and concept of agriculture, including food security, nutrition, informal trading and customary exchanges as well as educating systems, which reflect these realities and teach the ability to respond to and explore options.

Furthermore, the respondents, among other alternatives, preferred on-site demonstration and discussion for training. This requires the use of extension agents who can reach them in their rural settings.

Among the problems expressed by the rural women, cost of hiring labour for bush-clearing and leasing land were seen to be high. This was so because most women depended on leasing land and paid male workers, who usually cleared the land. Although some women would like to use

mechanised equipment, the operation of the communal land tenure system did not allow for easy mechanisation.

Conclusion

The study clearly shows that rural women in the study area need training in a wide range of production activities, on-farm and off-farm. Such training will of necessity be aimed at increasing awareness, improving their indigenous traditional skills to more scientific ones to increase production, reduce drudgery, and increase the profit margin of their sales.

The study recommends the following:

1. The need for specific skill development in agricultural production, business management, and marketing. Therefore, relevant agricultural education should be delivered to these rural women by trained agriculturalists or extension agents. This should be on-site to encourage their interest. The education programme should be friendly and flexible to accommodate their cultural impediments.
2. The need for government involvement in credit or subsidy procurement and land acquisition to encourage women farmers. Improved health care and childcare provisions are most likely to enhance their productive capacities.

REFERENCES

Bryson, J. C. (1981) Women and agriculture in sub-Saharan Africa: Implication for development. *African Women in Development Process* (ed. Nelson, Nici Freak Case & Co. Ltd). pp. 29 - 45.

Fairbaim-Dunlop, P. (1994) Educating future women farmers. *The South Pacific Proceedings of Women in Agriculture*. 1994 International Conference, Melbourne, Australia.

Kandiyoti, D. (1985) Regional variations in Africa. *Women in rural production system: Problems and policies.* UNESCO.

Malize, N. (1997) Women in agriculture: The way forward. *Paper presented at the Seminar on the World Rural Women's Day Celebration, Anambra, 15th October 1997* (unpublished).

McCaughey, W. (1994) Women, agriculture, the environment and technology. *Proceedings of Women in Agriculture*. 1994 International Conference, Melbourne, Australia.

Onuoha, E. R. & **Nnadi, F. N.** (1999) *Fundamentals of Agricultural extension and rural sociology.* Ibadan, Sibon Books Ltd.

Outtara, M. (1994) Farming for our future: An environment programme. *Proceedings of Women in Agriculture*. 1994 International Conference, Melbourne, Australia.

Sadik, N. (1991) *Introduction to Symposium at the 18th Session of the ACC/SCN.* New York, Feb. 1991.

Simmons, E. B. (1976) Economic research on women in rural development in Northern Nigeria. *Overseas Liaison Conference*. American Council on Education, Paper #10.

UAPS (1997) *Population and development issues for junior researchers: Guidelines for application*, 1997 edn.

World Bank (1998) *Sub-Saharan Africa: From crisis to sustainable growth*. A long-term perspective study. Washington DC.