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Extension Needs of Women Cassava Farmers in Igueben and Esan Northeast Local Government Areas of Edo State, Nigeria

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Abstract: Women's advancement is predicated upon their educational development. But what exactly should this education focus on vis-à-vis cassava production? Answers to this question pre-suppose an understanding of their knowledge of modern cassava production-related practices. The study addresses these issues by gathering data from 120 women cassava farmers in two selected local government areas of Edo State. Results show that the respondents were relatively young, largely illiterate and had long years of farming experience. Their levels of knowledge of improved cassava varieties and fertilizers were high while they were low for herbicides and recommended agronomical practices. There is therefore a need for the agricultural extension agency to focus its educational efforts on these problems, in addition to providing such farmers with information on sources of farm chemicals, credit and market opportunities.

Résumé: La promotion des femmes dépend de leur niveau d'instruction. Mais en quoi cette instruction pourrait-elle leur être utile quant à la production du manioc? Les réponses à cette question présupposent une compréhension de leur connaissance sur les pratiques modernes relatives à la production du manioc. Telles sont les questions soulevées dans cette étude. Les données sont collectées auprès de 120 fermières productrices de manioc dans deux communautés locales de l'État de Edo (Nigeria). Les résultats montrent que les enquêtées sont relativement jeunes, totalement analphabètes et ont des années d'expérience dans l'agriculture. Elles ont une grande connaissance des meilleures variétés de manioc et des fertilisants, alors qu'elles ignorent presque les herbicides et les pratiques agronomiques recommandées. Il y a dès lors une nécessité pour l'agence de développement agricole de concentrer ses efforts sur ces problèmes et fournir à ces femmes les informations relatives aux produits chimiques agricoles, aux possibilités des crédit et à celles offertes par le marché.

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Introduction

The United Nations declared the decade, 1976 to 1985, as the 'International Decade for Women Equality, Development and Peace'. This step was taken in order to encourage nations, governments, non-government organisations, international agencies, and research and educational institutes to give priority to the development of women. Women have generally been relegated to the background in development programmes and this was why the Food and Agricultural Organisation (FAO 1990) emphasised the need for women to be integrated into any programme designed to develop the agricultural sector. According to Williams (1984), women's role in agriculture is assumed to be low and only supportive of their husbands. In a similar vein Okojie (1992) opined that the erroneous belief that women are secondary farmers whose role was limited to giving assistance to their husbands probably explained their non-inclusion in past development programmes. As Williams (1976) observed, these had previously always been directed at their male counterparts.

However studies have shown that most rural women are farmers (Williams 1984) and are responsible for the production of 80 percent of the food in Africa (Development Communication Report, 1990/93). The FAO (1985) estimates show that women contribute over 40 percent of the total agricultural labour force in two-thirds of 82 developing countries in the world. Osuala (1991) states that African women constitute 60-80 percent of the agricultural labour force. These figures show the importance of women in the agricultural development process. Further, Mickewait (1989) observed that most African women are significantly involved in subsistence agriculture, while Olayide and Bello-Osagie (1980) classified them as the backbone or pillar of small peasant farming in Nigeria. These studies confirm the need to include women in agricultural development processes if the national goal of economic development is to be achieved.

Williams et al (1984) assert that education is one of the variables for achieving economic growth, and extension education is concerned with the educational task of disseminating useful and modern agricultural information to farmers. Women farmers, like their male counterparts, need training in technical knowledge if their productivity is to be enhanced. The transformation of traditional or peasant

agriculture, of which women are the life-blood, must of necessity emphasise the training and education of rural women. According to Williams *et al.* (1984), knowledge of innovation is a prerequisite for innovation adoption and, by inference, the development of the agricultural sector. The need to conduct research into client needs (of which educational need is a component) was emphasised in a 1997 seminar on food security organised by the European Commission and the Centre for Agriculture and Rural Cooperation (EC and CTA, 1998).

Scientific and technological information is an essential resource for agricultural development, and a crucial part of the information dissemination process is an understanding of the educational needs of farmers. This is necessary in order to make extension campaign relevant to farmers' socio-economic conditions and enhance the effectiveness of the extension agency (Rogers and Shoemaker, 1971). We need therefore to ask ourselves what, in the context of women farmers and in relation to cassava crop, what are the specific extension needs of women farmers in Edo State?

Objectives of the Study

The specific objectives of this study therefore are to:

1) Examine the socio-economic characteristics of women cassava farmers in the study area.
2) Identify their sources of information on improved farming practices.
3) Assess their level of awareness of improved farm packages associated with cassava production with a view to determining and prioritising their information needs.
4) Determine their extension needs.

Methodology

This study was conducted in the Igueben and Esan Northeast local government areas of Edo State and focused specifically on women cassava farmers. Random samples of three communities in each local government were taken. Afuda, Idumugo and Idumenka were chosen in Igueben L/G while Ewoyi, Amedokhian and Efandion were

selected in Esan Northeast L/G. A systematic sampling was further carried out to select 20 women cassava farmers from each of the communities, making the total respondents 120.

An interview schedule was employed in collecting data from the respondents. Analysis involved frequencies, percentages, mean and standard deviations and a four-point Likert scale to determine the relative importance of respondents' perception of selected items. A mean score value of 2.5 and above indicates that the respondents' perception of the affected variable is important. A value below 2.5 is taken as not important.

Discussion of Findings

Table 1 shows that the single largest age category of respondents (35.83 percent) was above 45 years old. About 31 respondents, representing 25 percent, were between 36 and 45 years, while respondents within the age bracket of 26–35 percent constituted 30.83 percent of the total. Only 7.5 percent of the respondents were less than 26 years old. Further analysis of the results gives the average age of the respondents as 39.5 years with a standard deviation of 9.8 years, implying that respondents' deviation from the mean age was not more or less than 9.8 years. This result indicates that about 56 percent of the respondents fell within the range of 26–45 years, suggesting that the majority of women cassava farmers were relatively young. Their relatively young age may make them receptive to new information regarding farming activities.

Table 1: Distribution of Respondents According to Age

Age (years)	Frequency	%
Below 26	9	7.50
26–35	37	30.83
36–45	31	25.83
Above 45	43	35.83
Total	120	100.00

Source: Field Survey, 1999.

Table 2: Distribution of Respondents According to Educational Status

Education	Frequency	%
No formal education	23	19.17
Primary education	48	40.00
Secondary education	30	25.00
Tertiary education	19	15.83
Total	120	100.00

Source: Field Survey, 1999.

Table 2 shows that the educational attainment of the respondents to be rather low, since about 60 percent were not educated beyond the primary school level. Some 25 percent had attended secondary school, and 15.83 percent had post-secondary education. Their poor educational background may likely affect their knowledge of innovations, on the assumption that educated people tend to embrace knowledge of modern farming practices (Williams *et al.*, 1984).

Table 3: Distribution of Respondents According to Years of Farming

Years	Frequency	%
5 and below	10	8.33
6–10	23	19.17
11–15	21	17.50
16–20	39	32.50
Above 20	27	22.50
Total	120	100.00

Source: Field Survey, 1999.

Table 3 shows that 10 or 8.33 percent of the respondents had been farming for not more than five years, 19.17 percent for six years and 17.50 percent for 11–15 years. Most (32.50 percent) have been farming for 16-20 years while 22.50 percent have been in the farming business for more than 20 years. The average farming experience of

the respondents was 15.1 years with a standard deviation of 6.2 years. The Table also indicates that the majority (55 percent) of the respondents have been farming for 16 years and above. This long experience of farming is likely to have exposed them to modern cassava farming information.

Table 4: Respondents Source of Information on Improved Farming Practices

Source	Frequency *	%
Family/friends	107	89.17
Radio	50	41.67
Television	12	10
Extension agents	10	8.33
Newspapers	7	5.83

Source: Field Survey, 1999 * Multiple response hence total exceeds 120.

The various source of information on improved farming practices for the respondents are reflected in Table 4. The major source of information was family/friends (89.17 percent). This finding confirms the results of Birkhacuser, Evenson and Feder (1991) that other farmers are the major source of information for most farmers. About 42 percent of the respondents obtained information through the radio, 10 percent television, 8 percent extension agents, and only just over 5 percent from newspapers.

Table 5 shows that practically all the respondents had some knowledge of improved cassava variety, while 98.33 percent knew about the use of fertilizers. With respect to other innovations, 55 percent were aware of insecticide, 35 percent knew about recommended crop spacing and 34 percent were aware of the use of herbicides. While 31.67 percent knew about the recommended planting times, 29.17 percent were informed about the recommended harvesting time.

Table 5: Respondents Awareness of Cassava Production-Related Innovations

Innovation	Frequency *	%
Improved cassava variety	120	100
Fertilizer	118	98.33
Insecticide	66	55
Herbicide	41	34.17
Recommended planting time	38	31.67
Recommended crop spacing	42	35
Recommended harvesting time	35	29.17

Source: Field Survey, 1999. * Multiple response, hence total exceeds 120.

Table 6: Prioritisation of Information Needs of Respondents

Innovation	Respondents requiring information	
	Frequency *	%
Improved cassava variety	-	-
Fertilizer	2	1.67
Herbicide	79	65.83
Recommended planting time	82	68.33
Recommended crop spacing	78	65.0
Recommended harvesting time	85	70.83
Pesticide	54	45.0

Source: Field Survey, 1999. * Multiple response hence total exceeds 120.

Note: Data were computed from table 5 by subtracting the percentage knowledge from 100%.

Table 6 shows the areas in which the respondents require extension attention. The first aspect concerns the recommended harvesting time, since about 71 percent of them were ignorant of it. Harvesting crops at the recommended time prevents spoilage from pest and/or diseases. It equally helps preserve the crop nutrient level i.e. its nutrient quality. The second priority area is recommended time (68 percent). Planting crops at the right time promotes efficient crop growth and productivity.

Thirdly, around two-thirds of the respondents needed information on herbicides. This knowledge is two-fold: both the types of herbicides as well as the application methods. The use of herbicides in place of manual weeding is time-saving and allows the women to engage in other productive activities. Recommended crop spacing, the fourth information need of the respondents (65 percent), is important since crop overcrowding will lead to poor harvests regardless of the improved nature of the varieties been used. Over-spacing will be uneconomical and result in under-utilisation of the resources.

The Table also shows that many respondents (45 percent) also need training in the use of insecticides. Pests and diseases have always been major problems for farmers. It has been estimated that in developing economies one third of total crop output can be lost to pests when farming is conducted without the use of pesticides (Ware 1983). Information on fertilizer usage does not appear to be crucial as only 2 percent of the respondents lacked the knowledge. However, beyond knowledge of its existence, farmers may require education on the application methods. Fertilizer is particularly needed to boost productivity especially in areas where the soil is lacking in nutrients (Dupriez and De Leener, 1989).

Table 7: Farmers Perception of Areas of Extension Needs

Areas	Mean score
Source of farm chemicals	3.52*
Fertilizer application method	3.49*
Market opportunities	3.24*
Insecticide/herbicide application method	2.83*
Source of credit facilities	2.33
Source of improved varieties	2.00
Source of farm implements	1.82
Recommended crop spacing	1.56
Recommended planting time	1.41
Recommended harvesting time	1.22

Source: Field Survey, 1999. Note: Mean score values of 2.5 and above are considered important.

Table 7 reveals the relative importance of respondents' perception of the areas in which they require extension services. Four of these areas are considered to be important as their mean score exceeds 2.5. These are the source of farm chemicals (3.52), methods of application for fertilizers (3.49), and insecticide/herbicides (2.83), as well as marketing outlets for their farm produce (3.24). This result clearly indicates that the respondents are interested in increasing output and sales of their produce. Respondents' scores on sources of credit facilities (2.33) were equally high although not considered very crucial.

In other respects the results suggested that the following issues were not crucial: the sources of improved cassava varieties (2.00), farm implements (1.82), and recommended agronomic practices. The results in Table 7 reflect the needs of the respondents as they themselves expressed them. Some needs that were not considered important could in fact be relevant for improved farming. The majority of respondents were ignorant of the existence of most of the improved agricultural technologies.

Conclusion and Recommendations

This study has highlighted three key issues which policy planners and researchers should be aware of. Despite the respondents' many years of farming experience they were still deficient in the knowledge of modern farming practices, which are prerequisites for increased agricultural productivity. Clearly, we must not assume that farming experience of many years' duration necessarily translates into knowledge of improved farm practices. A second issue raised is the tendency for farmers to perceive certain vital aspects of the extension message to be unimportant for increased agricultural productivity. Lastly, extension work must go beyond merely passing on information to farmers only on improved technologies.

The study also revealed that the women cassava farmers did not have information concerning proper harvesting and planting times, and crop spacing. They also lacked skills with respect to the proper application of farm chemicals. ADP activities in the study area appear to be very minimal thus making the area a fertile ground for an extension focus.

In view of these findings the following recommendations are put forward:

- The ADP should strengthen its activities in areas which the study indicates that capacity is lacking, and should plan programmes to address women cassava farmers' specific educational needs: the knowledge of planting, harvesting time, crop spacing and farm chemical application.
- In addition, they should advise farmers on the sources of farm chemicals, improved varieties and credit as well as providing them with information on market opportunities.
- It is equally necessary that extension workers teach farmers about the importance of improved farming practices, especially the agronomic practices, which the farmers consider to be unimportant.

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