TRAINING NEEDS OF WOMEN CASSAVA PROCESSORS IN IBADAN/IBARAPA AGRICULTURAL ZONE OF OYO STATE, NIGERIA

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ABSTRACT
Cassava is Africa's second most important staple food after maize and yet the effort made by rural women in its processing has not translated to commensurate improvements in their socioeconomic status which is traceable to inadequate enterprise knowledge. This concern gave rise to this study with the aim is to ascertain the level of knowledge and skills required by women cassava processors. A multistage sampling technique was used to select 180 respondents for the study. Descriptive statistics (frequency, percentages and means) and inferential statistics (Pearson's Product Moment Correlation) were used to analyse the data for the study. Majority (72.7%) of women cassava processors were between ages of 36 and 53 years and (62.0%) had no formal education. Thirty four percent of the cassava processors attended courses other than cassava processing. The respondents had a low level of knowledge on cassava processing and their skill level is on the average. The training needs of the women cassava processors were indicated in the following areas; finance/numeracy, cost saving techniques, business management, value addition techniques and labour saving technique. The study concludes that there is need for training and re-training in most of the areas of their needs which will help the women harness maximum benefits from their cassava processing enterprises.
Keywords: Women cassava processors, Training needs, Skill Acquisition,

INTRODUCTION

Cassava is Africa's second most important staple food after maize in terms of calories consumed (African Union, 2006). About half of the world's production of cassava is found in Africa. Cassava as an important staple crop plays five important roles in African development as stated by Nweke *et al*., (2002) these are: acting as famine reserve crop, food staple for rural people, cash crop for both rural and urban households and as raw material for animal feed and industrial products. Cassava has also been identified as one of the crops with the greatest potential to combat poverty as well as food and nutritional insecurity (African Agriculture, 2007).

It is mainly grown by poor farmers many of which are women often farming on marginal lands. The women form an active labour force but they rarely own enough means of production to flourish. They account for 70 percent of agricultural workers, 80 percent of food producers, 100 percent of those who process basic foodstuff and they undertake 60% to 90% of marketing (Fresco, 2008). Rural women undertake most processing activities; and the recent rise in commercial cassava production accords more importance to the role of rural women, because the post-harvest activities are dominated by them (UNIDO, 2007). However, massive involvement of women in cassava processing has not translated to commensurate improvements in their socioeconomic status. A number of schemes such as the Women in Agriculture (WIA) component of the Agricultural Development Projects (ADP) have been targeted towards the improvement of rural women in agriculture. However, the desired goals have not been achieved by most of these schemes (Madukwe and Ozor, 2004). The reasons for this may include inappropriate training given to women without appropriate categorisation and discerning the specific areas of need.

Training need is the difference between what exist and what is desired (Barbazette, 2006). The difference is usually visualized in knowledge, skills, and attitudes of an individual or a group of people. According to Gupta (2007), meeting this need is expected to lead to efficiency in the occupational performance of the recipients. Training need assessment thus determine whether there is a disparity between what is required for cassava processing to enhance improved yield and quality and the present level of processing. Therefore, this study is conducted to determine the socio-economic characteristics of the women cassava processor, determine the enterprise characteristics of women involved in cassava processing, examine the level of knowledge and skills on cassava processing, to identify the training needs of the women cassava processors and to identify the means through which the women sourced information on cassava processing activities.

The hypotheses of the study, stated in null form, are as follows

H_01. There is no significant correlation between the quantity of cassava produced by the women processors and their training needs

H_02. There is no significant relationship between knowledge/skills received by the women cassava processors and their training needs

METHODOLOGY

The study was carried out in Ibadan/Ibarapa agricultural zone of Oyo State. It is one of the four agricultural zones of the Oyo State Agricultural Development Programme (OYSADEP). The zone is made up of eight local

government areas comprising Lagelu, Ido, Akinyele, Egbeda, Ona Ara, Ibarapa North, Ibarapa Central and Ibarapa East. Each local government area represents an extension block of the OYSADEP. All rural women involved in cassava processing in Ibadan/Ibarapa agricultural zone of Oyo state constituted the target population for the study. A multistage random sampling technique was used to select the respondents for this study. Four ADP blocks from the zone were randomly selected namely; Lagelu, Ona-Ara, Akinyele and Ibarapa central. Secondly, one village was then randomly chosen from each of the selected blocks; hence, four villages were selected. Thereafter, cluster sampling technique was used to select cassava processing locations in the selected villages, where 45 women cassava processors were randomly selected to have a total sample size of 180 respondents for the study. Data were collected with interview schedule administered on the respondents.

Measurement of variables

To assess the training needs of women cassava farmers, the respondents were asked to indicate the extent to which they require further training via the options on a list of possible activities on cassava processing such as sorting, peeling, washing, grating, fermenting, pressing, sifting, roasting and steering. Their responses were evaluated on a 3 – point Likert-type rating scale of ;to a large extent , to a lesser extent and not at all and scores of 2, 1 and 0 were assigned, respectively. Also, the respondents were exposed to a 16-item knowledge scale to test their level of knowledge on cassava processing activities. Their scores from responses to the scale were used to categorise them into high and low levels of knowledge. Descriptive statistics used to analyze the socio-economic characteristics of the respondents were frequencies, percentages and mean. Pearson Product Moment Correlation was used to test the hypothesis. This was employed to investigate which of the enterprise characteristics and knowledge level on cassava processing significantly influenced the respondents training needs on cassava processing.

RESULTS AND DISCUSSION

Personal characteristics of the cassava processors

The results in Table 1 show that majority (72.7%) of the women cassava farmers were between 36-53 years old with a mean age of 41.5±9.1years. , This implies that middle aged women dominated cassava processing in the study area. This result is in line with the finding of Nwarko *et al.* (2007), which reported that majority of women cassava processors are in their forties. Most of the farmers had some form of education: primary (25.0%), secondary (26.7%) and tertiary (4.5%) but 43.8% of them had no formal education. The inadequate educational attainment of processors will inhibit the adoption of modern cassava processing techniques, except for semi-modern techniques (Davies *et al*, 2008); as sound education impacts on peoples' ability for a balanced assessment of innovations (Acker and Gasperini, 2009). According to Adeoti and Ibitoye (2002), the number of persons in the household is important in determining the labour availability as well as household responsibility burden. The Table also shows that most (60.8%) of the respondents had between 4 and 6 persons in the family, 28.4% of the households had less than 4 persons, while 10.8% of them had more than 6 persons. On monthly income , most (73.9%) of the cassava processors earned between ₦10,000 and ₦56,000 monthly, 17.0% made between ₦56,001 and ₦102,001 and 9.1% made more than ₦102,001 monthly from their enterprises. The mean monthly income of ₦45,931±39,404 suggests that most of the entrepreneurs operate on small scale. This is a reflection of small holdings common among Nigerian and West African women cassava farmers. This agrees with the findings of FIIRO (2005) that most players in the cassava value chain are smallholders and low income earners. Most (67.6%) of the cassava processors were involved in farming as their primary occupation, 13.1% were civil servants and 9.7% were traders. This implies that most of the processors harvest the cassava they process from own farms, corroborating the findings of Nwakor *et al* (2007). Also on secondary occupation, most (60.2%) of the processors were involved in trading implying that they are the marketers of their processed cassava. This supports the findings of Yohanna and Abimiki (2004).

Table 1: Distribution of respondents by their personal characteristics

Variable	Frequency	Percentage
Age (years)		
18-35	35	19.9
36-53	128	72.7
More than 53	13	7.4
Marital status		
Single	19	10.8
Married	143	81.3
Divorced	9	5.1
Widowed	5	2.8

Variable	Frequency	Percentage
Years of formal education		
None	77	43.8
1-6	44	25.0
7-12	47	26.7
Above 12	8	4.5
Alternative education		
None	106	60.2
Adult	28	15.9
Vocational	28	15.9
Religious	7	4.0
Literacy	7	4.0
Religion		
Christianity	72	40.9
Islam	104	59.1
Household size		
1-3	50	28.4
4-6	107	60.8
Above 6	19	10.8
Primary occupation		
Teaching	16	9.1
Civil service	23	13.1
Farming	119	67.6
Trading	17	9.7
Artisan	1	0.6
Secondary occupation		
Teaching	1	0.6
Farming	66	37.5
Trading	106	60.2
Artisan	3	1.7
Monthly income (₦)		
10,000 – 56,000	130	73.9
56,001 – 102,001	30	17.0
102,002 – 148,002	9	5.1
148,003 – 194,003	6	3.4
Above 194,003	1	0.6
Total	176	100.0

Enterprise Characteristics

Result in Table 2, establishes that majority (71.0%) of the women processed less than 1 tonne of cassava product per month and just 22.7% of them processed between 1 and 5 tonnes, while 6.3% processed more than 6 tonneswith a mean of 1.7±3.4 tonne/month. This implies that cassava processing is a small scale enterprise in the study area. This is in tandem with the finding of FAO (2004) which reported that though cassava is produced mainly by women in Nigeria but it is still produced on a small scale. Also, half (50.0%) of the processors had between 6 and 10 years of experience in cassava processing enterprise, 21.0% of had between 11 and 15 years of experience while 14.2% of had less than 6 years of experience. wi th a mean of 10.5±5.1 years This shows that cassava enterprise in the study area is mature enough for perfection of knowledge and skills of the processor. Furthermore, most (71.6%) of the entrepreneurs processed *Gari* in the study area as well as *Lafun*

(65.9%) and *Fufu* (15.9%). This result implies that *Gari* is the mostly processed product, which might be as a result of its level of consumption and acceptability. This is in tandem with the finding of Taiwo (2006) which reported that, the choice of cassava products of the processors are determined by the utilisation potentials of cassava in their area. Most (80.1%) processors funded their enterprises with personal savings, 49.4% financed theirs from cooperative funds (credit and loan), while 17.6% and 16.5% got funding from family/friends and bank loans, respectively. This result suggests that most of the entrepreneurs do not have access to substantial funds for their enterprises, which is connected with the small scale nature of the enterprises. Adeoye (2005) reported that informal financial institutions like personal savings, thrifts and rotational contribution are the major providers of funds for the promotion and development of small scale businesses in rural areas. The source of labour for cassava processing enterprises was

mostly (61.9%) self labour, hired labourers (54.5%) and family labour (43.8%). This is a consistent feature of enterprises operated on small scales. This finding is corroborated by that of Rahman (2004), who found that the cassava processing enterprises are still operated on small scale and women-dominated.

Table 2: Distribution of respondents by their enterprise characteristics

Variable	Frequency	Percentage
Quantity produced per month (tonnes)		
< 1	125	71.0
1 – 5	40	22.7
6 – 10	8	4.5
> 10	3	1.8
Years of enterprise experience		
1 – 5	25	14.2
6 – 10	88	50.0
11 – 15	37	21.0
16 – 20	22	12.5
>20	4	2.5
Products processed		
Gari	126	71.6
Fufu	28	15.9
Starch	9	5.1
Lafun	116	65.9
Source of finance		
Personal savings	141	80.1
Bank loan	29	16.5
Money lender	1	0.6
Cooperative	87	49.4
Family and friends	31	17.6
Source of labour		
Self	109	61.9
Family members	77	43.8
Hired	96	54.5
Total	176	100.0

Access to sources of information

The results indicate that most (60.8%) of the respondents had access to information through fellow processors (157.4), by friends and family (145.5) and neighbours (126.1). This implies that person-to-person diffusion plays an important role in information dissemination process in the study area. Extension agents (109.10) and radio (88.7) were not as accessed as the informal sources of information on cassava processing. The sources least patronised were the internet (9.0), print media (15.4), mobile phones (33) and television (46.1). This result disagrees with the assertion of Torimiro and Oluborode (2006) that radio is always the most accessed source of information in rural communities.

Table 3: Distribution of women cassava processors' access to sources of information

Sources of information	Never	Rarely	Always	Weighted score
Extension agents	17.6	55.7	26.7	109.10
Fellow processors	3.4	35.8	60.8	157.40
Friends and family	12.5	29.5	58.0	145.5
Neighbours	12.5	48.9	38.6	126.10
Radio	19.3	72.7	8.0	88.7
Television	58.0	38.1	4.0	46.1
Print media	85.2	14.2	0.6	15.4
Mobile phones	80.1	6.8	13.1	33.0
Internet	92.0	6.8	1.1	9.0
Total	**100.0**	**100.0**	**100.0**	

Knowledge level

The level of knowledge of the cassava processors is expected to be a product of their access to information as well as their experience in the enterprises. Result of analysis of the knowledge test in Table 4 shows that more (51.1%) of the processors had low level of knowledge about

cassava processing. This finding is in tandem with that of Yohanna and Abimiki (2004), who found that cassava processing still continue to present daunting challenges because of the technologies involved in production which most farmers can still not use. This implies that there is need for training and re-training to update the knowledge base of the respondents on their enterprises.

Table 4: Distribution of respondents by their levels of knowledge of cassava processing

Knowledge level	Frequency	Percentage
Low	90	51.1
High	86	48.9
Total	176	100.0

Areas of training needs

The areas of cassava processing in which the respondents required additional training as given in terms of weighted scores on Table 5 shows that most of the respondents had needs in finance/numeracy (173.3), cost-saving techniques (169.4), business/enterprise management (169.3), value addition techniques (166.0), labour saving techniques (163.6) and environmental management (153.4). This implies that most of the processors desired to have training in areas that will facilitate

profits for their enterprises. It is important to note that all the processors indicated that they needed no training in marketing their cassava products, thereby implying that there is no problem of patronage for these products. This is contrary to the position explained by Anga (2003), who stated that agro-producers are not well informed of all available market options and thus are not keen on marketing assistance. The training needs of the women cassava farmers were found at the medium level in the study area.

Table 5: Distribution of respondents by areas of training needs

Activities	To a large extent		To a lesser extent		Not at all		Weighted score
	Freq	%	Freq	%	Freq	%	
Finance/numeracy	144	81.8	17	9.7	15	8.5	173.3
Cost-saving techniques	136	77.3	26	14.8	14	8.0	169.4
Business management	138	78.4	22	12.5	16	9.1	169.3
Value addition techniques	130	73.9	32	18.2	14	8.0	166.0
Labour-saving techniques	131	74.4	26	14.8	19	10.8	163.6
Environmental management	120	68.2	30	17	26	14.8	153.4
Steering	33	18.8	89	50.6	54	30.7	88.2
Roasting	41	23.3	65	36.9	70	39.8	83.5
Sifting	16	9.1	109	61.9	51	29.0	80.1
Fermenting	15	8.5	101	57.4	60	34.1	74.4
Pressing	14	8.0	83	47.2	79	44.9	63.2
Grating	12	6.8	85	48.3	79	44.9	61.9
Sorting	8	4.5	75	42.6	93	52.8	51.6
Washing	13	7.4	48	27.3	115	65.3	42.1
Peeling	7	4.0	53	30.1	116	65.9	38.1
Marketing	0	0.0	0	0.0	176	100.0	0

Table 6: Distribution of respondents by level of training needs

Training need level	Frequency	Percentage
Low	71	40.3
High	105	59.7
Total	176	100.0

Test of hypotheses

The hypothesis was set to test for relationship between cassava quantity produced by the women processors and their training needs.

The respondents' index of training needs was tested against their cassava quantity produced using Pearson Product Moment Correlation (PPMC). Results of the analysis on Table 7 shows

that there was significant relationship (r = 0.291, p = 0.000) between the quantity produced by women cassava processors' and their training needs on cassava processing. This implies that the higher the quantity of products of the cassava processors, the more they realised needs for training to manage the enterprises efficiently.

Table 7: PPMC for test of relationship between quantity produced per month and training needs

Variable	r-value	p-value	Decision
Quantity produced	0.291	0.000	Significant

The hypothesis was to test for relationship between knowledge/skills of the women cassava processors and their training needs

The respondents' training needs were tested against their knowledge scores using Pearson Product Moment Correlation (PPMC). Result of the analysis on Table 8 shows that there was significant relationship (r=0.398, p=0.000) between the women cassava processors' knowledge on cassava processing and their training needs on cassava processing. This implies that the higher the knowledge and skills of the women cassava processors, the more they could recognise the gap that necessitate the need for training. This is in tandem with the findings of Ogunleye *et al* (2008) that cassava processors in Oyo state have the basic knowledge necessary for agro-technological revolution and yet are desirous of further training in their enterprises.

Table 8: PPMC for test of relationship be respondents' knowledge and training needs

Variable	r-value	p-value	Decision
Knowledge	0.398	0.000	Significant

CONCLUSION AND RECOMMENDATIONS

The women cassava processor had a low level of knowledge on cassava processing and their skill level is on the average. Therefore, the women involved in cassava processing must be properly trained to meet needs and ensure satisfactory standard performance. Training on specific aspect of needs for women cassava processors will increase production and improve their enterprise. The study recommends that there is need for training and re-training in most of the areas of their needs which will help the women harness maximum benefits from their cassava processing enterprises.

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