

EVALUATION OF FACTORS AFFECTING THE USE OF IMPROVED COCONUT PROCESSING TECHNOLOGIES BY PROCESSORS IN BADAGRY LOCAL GOVERNMENT AREA OF LAGOS STATE, NIGERIA.

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Abstract

The constraints of coconut processors to the use of improved coconut processing technologies in Badagry Local Government Area of Lagos State were investigated using descriptive statistics. Data were obtained from 105 coconut processors using multistage sampling technique. The local Government Area was stratified into three local council Development Areas (LCDAs) namely; Badagry central, Badagry West and Olorinda. Five communities were purposively selected from each of the Local Council Development Areas giving a sum of 15 communities under study. From each of the community, 7 respondents were randomly selected to give a total sample size of 105 respondents. Majority (61%) of the processors were females and 71.4% were ageing with processing experience of over 15 years. 73.3% had both primary and secondary education while 20.0% did not attend school. 85.7% of the processors were aware of dehusking lever, 71.4% aware of rotary copra dryer and 65.7% aware of coconut oil expeller. Inadequate funds (82.9%), lack of credit (82.9%) and high costs of processing equipment (78.1%) were the major problems confronting processors. Therefore, to solve these problems the Local Government Council should organize the processors towards establishing thrift cooperative Societies.

Keywords: Constraints, Coconut, Processors, Improved, Coconut Processing Technologies.

Introduction

The Coconut palm (*Cocos nucifera*) is one of the important economic crops grows throughout the tropic and is widely called the “tree of life” for its important role in small holders’ livelihoods as a direct source of cash income, nutrition and materials (Warmer, 2007). According to NIFOR (2009), the early history of the Coconut palm is shrouded in mystery as there were various claimed by various scientists as to the country of origin of the coconut palm. However, the generally more accepted opinion to the origin of coconut is somewhere in Malay Archipelagos or in the Pacific Islands (NIFOR, 2009).

The principal product of coconut palm is the coconut meat or copra which is processed to obtain three commercial products which include coconut milk, coconut oil and coconut cake. The coconut oil is used as cooking oil, hair oil, massageoil, manufacture of biscuits, cookies, sweets,

margarine, soaps and detergents. It is also used as industrial oil. The coconut water from the young nuts is a popular beverage. The husk of the nut provides important fibre’s, coconut coir, which can be used for ropes, carpets, brushes, etc. The shell of the nut is used for household utensils and the charcoal made from it is an excellent basic material for activated coal. The leaves are used for roof thatching. The mid ribs of the leaves are used for brooms. Coconut wood is more and more being used for house building and other uses such as shade for other crops, land stabilization, furniture or tool handles (Foale, 2003).

The Federal Government realizing that there is a great potential for coconut in the country, particularly in the area of generating employment, increasing food production and farmers income and for providing other sources of foreign exchange included coconut palm as one of the mandate crops of the Nigerian Institute for Oil Palm

Research (NIFOR) in 1964. Therefore, NIFOR has developed some improved coconut processing technologies such as dehusking lever, husk fiber weaving frame, rotary dryer and coconut oil expeller which have been disseminated to the processors' over the years.

The processing of coconut is a major economic activity in the coconut growing belt of the coastal rain forest of Nigeria especially in Badagry area of Lagos State where the bulk of coconut plantations and holdings are located. However, despite the availability of these improved coconuts processing technologies developed in the country by NIFOR, Nigeria still remains an importer of coconut products from Asia and its neighbouring West Africa countries like Benin, Ghana and Cote d' Ivoire (Francoise *et al*, 2010). In the same vein, techniques which often lead to time wasting, drudgery, low farm incomes, poor quality products *e.t.c* are still in use (NIFOR, 2008). Therefore this study seeks to investigate the constraints militating against the use of improved coconut processing technologies in Badagry Local Government Area of Lagos State.

The specific objectives of the study were to; determine selected personal characteristics of the respondents; identify the constraints inhibiting processors from using improved coconut processing technologies; determine respondents sources of information on improved coconut processing technologies; and determine respondents awareness of selected improved coconut processing technologies.

Methodology

The study was carried out in Badagry Local Government Area of Lagos State in March, 2014. The multistage sampling technique was used for selecting the respondents. The Local Government Area was stratified into three Local council Development Areas (LCDAs) namely; Badagry central, Badagry West and Olorinda. Five communities were purposively selected from each of the Local Council Development

Areas making up a sum of 15 communities under study. From each of the community, 7 respondents were randomly selected to give a total sample size of 105 respondents.

Information were elicited from the respondents using well-structured questionnaire on the personal characteristics of the respondents, problems inhibiting the use of improved coconut processing technologies, awareness and respondents' sources of information on coconut processing technologies. The data collected were analysed using descriptive statistics such as frequency count and percentages.

Results and Discussion

Selected Personal Characteristics

Selected Personal Characteristics of the coconut processors in Badagry Local Government Area of Lagos State showed that more females (61%) were involved in coconut processing than the males (39%). Majority (71.4%) of the processors were ageing with higher percentage (67.6%) of the processors having processing experience of over 15 years. Also, majority (73.3%) of the processors had primary and secondary education. This finding agrees with Abiodun *et al.* (2011) that majority of respondents in urban South-west Nigeria had primary and secondary. The implication of this finding is that majority of the processors can be reached with technologies without much difficulties.

Table 1: Distribution of respondents according to selected personal characteristics (n=105)

Variable	Frequency	Percentage
Age		
< 30	10	9.5
31 – 40	19	18.1
41 – 51	1	1.0
51 – 60	35	33.3
> 60	40	38.1
Sex		
Male	41	39
Female	64	61
Educational Level		
No Formal Education	21	20
Primary	58	55.2
Secondary	19	18.1
Tertiary	7	6.7
Years of Processing Experience		
1 – 5 yrs	4	3.8
6 – 10 yrs	30	28.6
11 – 15 yrs	50	47.6
Above 15 yrs	21	20

Source: Field survey, 2014

Problems Inhibiting the Use of Improved Coconut Processing Technologies.

The major problems inhibiting the use of improved coconut processing technologies by coconut processors were inadequate funds (82.9%), lack of credit (82.9%) and high cost of processing equipment (78.1%) as shown in Table 2. This implied that processors did not have enough fund to purchase improved processing equipment needed for their processing activities to be more effective thus making them to produce on small scale. This finding agreed with Nwaru (2004) that poor financial position of the farmers compels them to produce on a very small scale and so earn relatively small income. In the same vein, about 72.4% and 69.5% indicated inadequate extension training and lack of technical support services respectively as problems inhibiting their use of improved coconut processing technologies. The implication of this is that the respondents did not have the required skills and expertise to operate and repair damaged processing equipment more so that there are inadequate extension training and technical support services for the respondents by the concerned organizations like NIFOR and LASCODA. Furthermore,

about 66.7% of the processors indicated expensiveness of labour as a problem to the use of improved coconut processing technologies. Nevertheless, 59% of the processors indicated inadequate information as a constraint inhibiting the use of improved coconut processing technologies. This implies that the respondents did not have current and up to date information on improved coconut processing technologies that will improve their efficiency and effectiveness of processing the product.

Table 2: Distribution of Problems Inhibiting the Use of Improved Coconut Processing Technologies (n=105)

Problems	Yes (%)	No. (%)
Inadequate funds	87 (82.9)*	18 (17.1)
Lack of credit	87 (82.9)	18 (17.1)
High cost of processing equipment	82 (78.1)	23 (21.9)
Unavailability of Coconut fruits for processing	33 (31.4)	72 (68.6)
Expensiveness of hired labour	70 (66.7)	35 (33.3)
Lack of technical support service	73 (69.5)	32 (30.5)
Inadequate information	62 (59)	43 (41)
Inadequate extension training	76 (72.4)	29 (27.6)

* = Figures in parenthesis are percentages

Source: Field Survey, 2013

Respondents Sources of Information on Improved Coconut Processing Technologies.

Table 3 shows the respondents' sources of information on improved coconut processing technologies. The result indicates that radio (68.6%) and fellow farmers (65.7%) were always used to obtain information on improved coconut processing technologies. This study corroborates with Ajayi (2003) that farmer in South West Nigeria use radio as their most popular source of information. Similarly, Igene (2012), citing Antholt (1994), attributed the rise in farmers preferring fellow farmers' as a first-hand information source to the apparent ineffectiveness in the public Extension Services in developing countries. Also, as indicated in Table 3, (76.29%) and (70.5%) of the respondents never used internet and extension agents as sources of information.

This finding agrees with Taiwo (2010) that farmers are not making use of NIFOR as one of their sources of information.

Table 3: Respondents sources of information on improved coconut processing technologies (n=105)

Sources of information	Always	Occasionally	Rarely	Never
Newspapers	10 (9.5)*	45 (42.9)	4 (3.8)	46 (43.8)
Fellow farmers	69 (65.7)	23 (21.9)	5 (4.8)	8 (7.6)
Radio	72 (68.6)	24 (22.9)	1 (1.0)	8 (7.6)
Television	22 (21)	14 (13.3)	10 (9.5)	59 (56.2)
Internet	8 (7.6)	17 (16.2)		80 (76.2)
Friends	20 (19.0)		27 (25.7)	58 (55.2)
Posters/Bulletins	25 (23.8)	7 (6.7)		73 (69.5)
Extension agents	10 (9.5)	8 (7.6)	13 (12.4)	74 (70.5)

* = Figures in parenthesis are percentages

Source: Field Survey, 2014

Respondents' Awareness of Selected Improved Coconut Processing Technologies.

On the awareness of improved coconut processing technologies the result in Table 4 indicates that most of the respondents were aware of the various improved coconut processing technologies like dehusking lever (85.7%), rotary copra dryer (71.4%) and coconut oil expeller (65.7%). This may be due to the fact that majority of the respondents were educated and also used radio and fellow farmers as their sources of information.

Table 4: Distribution of respondents according to awareness of selected improved coconut processing technologies (n=105)

Improved Coconut Processing Technologies	Awareness	
	Yes (%)	No (%)
Dehusking lever	90 (85.7)*	15 (14.3)
Husk fiber weaving frame	40 (38.1)	65 (61.9)
Rotary copra dryer	75 (71.4)	30 (28.6)
Coconut oil expeller	69 (65.7)	36 (34.3)

* = Figures in parenthesis are percentage

Source: Field Survey, 2014

Conclusion

The study has found that most of the processors were women, ageing with both primary and secondary school education and a processing experience of 11years and above. Radio and fellow farmers were the most frequently utilized sources of information by processors on selected improved coconut processing technologies. Consequently, most processors were aware of the selected improved coconut processing

technologies but they were handicapped in the use of improved coconut processing technologies by various problems such as high cost of processing equipment, inadequate extension training and lack of technical support service while inadequate funds and lack of credit were the major problems.

Recommendation

Based on the findings of this study, the following recommendations were made;

1. Processors should be encouraged to form functional Cooperative Societies to solve the problems of inadequate funds, lack of credit and high cost of processing equipment.
2. Training on improved coconut processing technologies by extension agents and other government agencies like NIFOR should be organize at least twice in a year; this will increase the interest of the processors and involvement in the use of improved coconut processing technologies.
3. Government should establish affordable credit scheme to enable processors access loan for processing thereby ensuring household and national food security.

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