

Constraints to Production, Processing and Marketing of Sweet-Potato in Selected Communities in Offa Local Government Area, Kwara State Nigeria

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ABSTRACT Offa Local Government Area is one of the major sweet-potato growing areas of Nigeria. Sweet potato is grown mainly on smallholder farms and concentrated particularly in communities in Offa Local Government Area. This study randomly selected 90 small scale farmers purposively from 9 communities to investigate constraints to production, processing and marketing of sweet-potato. Data were collected using an interview schedule. Results indicated that yields of 4-7 tonnes per hectare obtained by smallholder farmers are about 20-35 percent of the crop's potential yield. Reasons for this low output are limited cultivated land, lack of improved practices, poor storage facilities, lack of credit facilities, lack of extension training, poor transportation and high cost of input. Also, marketing of the crop is dominated by middlemen, to whom most of the profit accrue, thereby serving as a disincentive to the smallholder farmers. There is, therefore, a need for adoption of improved production techniques, development of appropriate and affordable storage and processing technologies, more efficient distribution and marketing systems and an effective extension service to improve current sweet-potato production in Nigeria.

INTRODUCTION

The importance of sweet potato is increasing in Nigeria's farming and food systems because it is easy to plant, matures easily and has enormous industrial and economic potentials (Chukwu, 1999). Also it has high nutritional energy qualities and the leaves are consumed as vegetables (Chukwu, 1999; Woolfe, 1992 and Holloway, 1993). Sweet potato is grown in most parts of Nigeria as a secondary crop but it reaches intense levels in some areas (Akoroda and Nwokocha, 1996). However, in Kwara State of Nigeria, particularly in Offa Local Government Area (LGA), it is a major cash crop where it enjoys high cultural status and the harvest season is celebrated with feasting and cultural dances (Agbo and Ene, 1993). Despite its growing importance and known potential as food, animal feed and raw material source, records of sweet potato production, processing and marketing in Nigeria's food system are scanty. Sweet potato has the potential for food security as well as serving as a cash crop. There is a need to document sweet potato production, processing and marketing activities and factors militating against them, particularly at a time when a variety of approaches to poverty alleviation are being considered by the Nigerian government and their development partners.

METHODOLOGY

This study was conducted in Offa LGA of Kwara State. Offa LGA falls within the Guinea Savannah region. It has an annual rainfall of 1000mm and a relative humidity that ranges between 65% and 80% in the dry and rainy seasons respectively. From a list of 890 sweet potato farmers, 90 who are producers, processors and marketers were purposively selected for data collection. The interview schedule used for data collection contained questions on farmers' profile, production, processing, marketing activities and their exposure to extension services. Attitudinal statements were used to investigate constraints they encounter in their production, processing and marketing activities. The data collected were entered and analysed in Statistical Package for Social Sciences (SPSS) using descriptive statistics of frequency distribution and percentages.

Table 2 shows that farmers' engagement in sweet potato production is between 1-10 years (72.2%) and above 20 years (4.4%). Pattern of land acquisition indicates that majority (67.8%) of the farmers inherited farmland, while a few (4.4%) purchased theirs. This tenure system usually does not encourage increased production, as those interested in purely commercial production may not have access to land. The

high proportion of farmers (63.3%) who grow sweet potato is encouraging. This suggests enormous capacity for adoption of improved technologies and increased production. Typically, most of the farmers (19.1%) adopt mixed cropping pattern. This is to ensure food security and guard against crop failure. Only a few (8.9%) are into sole sweet potato production. Tayo (2000) reported that sweet potato is cultivated either in intercrops with cassava, maize, sorghum, as vegetables or as mono-crops in small farm lots and peri-urban holdings. Table 2 also indicates that procurement of planting materials is mainly vines from harvested crops (54.4%). Friends (31%) and extension agents (14.4%) are the other sources. This procurement pattern may not be the best as it may encourage the spread of pests and diseases thus causing depression in yield and income levels. The results

Table 1: Profile of sweet potato farmers

Variable	Categories	Frequency
Age	21-49	97.8
	50 years and above	2.2
Gender	Male	90.0
	Female	10.0
Marital Status	Married	78.7
	Single	16.7
	Separated/ Widowed	1.1 3.3
	Household Type	
Household Type	Male headed	90.0
	Female headed	10.0
Educational Level	Formal	52.2
	Non-formal	47.8
Farm Size	1-3 acre	52.2
	4-6 acre	34.4
	7-10 acre	13.30

Table 2: Sweet potato production in Offa LGA

Variable	Categories	Percentage
Farming experience	1-10 years	72.2
	11-20 years	21.1
	above 20 years	4.4
Land tenure system	Inherited land	67.8
	Lease	27.8
	Purchase	4.4
Sweet potato variety grown	Improved	63.3
	Local	36.7
Adopted cropping Pattern	Mixed	91.1
	Sole	8.9
Planting materials source	Post harvest	54.4
	Friends	31.1
Labour source	Extension service	14.4
	Family labour	52.2
	Hired labour	43.3
	Others (Age group, friends)	4.4

also indicate that family labour is a predominant (52.2%) labour source followed by hired labour (43.3%). This has implications for the time, wives and children spend on other activities such as household and educational activities.

As regards processing of sweet potato, table 3 shows that traditional technique is the major (83.3%) processing method adopted. The results also indicate limited intermediate finished processed forms of sweet potato. Flour (72.2%) is the main processed form of sweet potato of sweet potato in the study area. The presence of confectionary factories in the area and the preparation of a popular local diet called 'amala' could be responsible. However, traditional processing techniques use crude gadgets and are labour intensive and time consuming. This in part could be responsible for the limited forms/products of sweet potato available in the area.

Table 3: Processing of sweet potato Offa LGA

Variables	Categories	Percentages
Processing techniques	Traditional	83.3
	Improved	16.7
Product form	Flour	72.2
	Boiled	17.8
	Chip	10.0

Results indicate on Table 4 that baskets (55.5%) and sacks (44.4%) are sweet potato package materials. About 82% and 17.8% of sweet potato produced are sold in the markets and farm gates respectively. The high proportion sold in the markets suggest that they are feeder roads linking farmers farm and the market. The annual profit margin is low, considering that the profit accruable to majority (89.00%) of the farmers is less than N10,000 after every planting season. Very few (19.9%) of the farmers make profit

Table 4: Marketing of sweet potato in Offa LGA

Variables	Categories	Frequency
Packaging	Baskets	55.5
	Sacks	44.8
Market	Market	82.2
	Farm gate	17.8
Annual profit margin	N1000 – N10,000	88.8
	N11,000	15.5
	N20,000	11.1
	Above N20,000	4.4
Union membership	No	63.3
	Yes	36.7
Unit price	Basket	N150-300
	Sack	70-90 kg N500-1,000
		N135 = \$1

Table 5: Sweet potato farmers extension exposure

Variable	Categories	Percentages
Contact with extension agent	Yes	92.2
	No	7.8
Frequency at visit	Every fortnight	48.9
	Once weekly	42.2
	No visit	8.9
Extension rating by farmers	Excellent	20.0
	Very good	36.7
	Satisfactory	43.3

between N11,000 – 20,000. These low figures could be attributed to low production. Table 4 also shows that the unit price of sweet potato ranges between N50 – 300 per basket and N5,000-1000 per sack. This study has shown that sweet potato farmers (63.3%) are not members of any union (co-operative or farmers group). They are probably unaware of the resource benefits derivable from such association and may not be able to make monetary contributions because of their poor resource base.

Table 5 shows that majority (92.2%) of sweet potato farmers have contact with extension. Frequencies of contact indicated are every fortnight extension contact as excellent (20%) very good (36.7%) and satisfactory (34.4%). These ratings indicate farmers' general satisfaction with the provided extension services in the study area.

The results on Table 6 indicate that inadequate government aid is a major problem as all of the farmers 98.9% agreed that it is constraint. Also 98.9% assented that high labour cost poses enough problem, while 72.7% and 71.2% mentioned access to credit and poor storage as notable constraints. About 66% access to poor market outlets as a constraint. Others are access to improved technologies (63.3%) and high incidence of pest and diseases (60.0%).

Table 6: Farmers' attitude to sweet potato production, processing and marketing constraints in Offa LGA

Statement	Response (Percentages)		
	D	U	A
Transportation system is poor	31.1	30.0	38.9
No access to credit facilities	-	27.8	72.2
Storage facilities are poor	-	28.9	71.2
Extension training is now available	51.1	2.2	46.6
No access to new technology	30.0	6.7	63.3
Poor market outlet	23.4	1.1	65.5
Government aid is inadequate	-	-	100.0
Hired labour is high	1.1	-	98.9
High pest and diseases incidence	32.2	7.8	60.0

CONCLUSION

The study indicates that farmers grow, process and market sweet potato and their products. Their output constrained by numerous factors such as inadequate government aid, labour cost, poor access to credit, poor storage facilities, lack of new technologies, poor market outlets and high incidence of pests and disease.

There is a need to improve sweet potato production and its products in enclaves where they are grown in Nigeria. Efforts to improve current production and allied activities must seek to reverse the weak presence/non existence of institutional support (Akoroda and Nwokocho, 1996), breed for high yield and control of pests and diseases. Others are development of suitable cultural and management practices, popularizing existing technologies, identify negative impact of socio-cultural and economic factors (Tayo, 2000). Indeed, there is a need to strengthen extension delivery system and the economic base of farmers through soft loans by lending institutions.

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