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Economics of Cocoyam Production and Marketing in Ekiti East Local Government Area, Ekiti State, Nigeria

[1]A.A. Adepoju and [2]D.J. Awodunmuyila
[1]Department of Agriculture Economics and Extension,
Ladoke Akintola University of Technology, Ogbomoso, Nigeria
[2]Department of Agriculture Economics and Extension,
Federal University of Technology, Akure, Nigeria

Abstract: This examined the economics of producing cocoyam in Ekiti East Local Government Area of Ekiti State. It highlights the importance of cocoyam production in alleviating the problem of food insecurity, income generation and attendance poverty facing the Nigeria economy. It also, identified the various constraints experienced by farmers during the process of production. One hundred and twenty farmers were randomly, sampled from 6 villages that were randomly selected in the LGA, they are namely; IIasa, IKun, Aroromi, Eda isinbode and Omuo Eiti. The analysis of the result showed that there was significant relationship, between income accruing from the sales of cocoyam output and socio- economic characteristics of the respondents, with an exception of household size. This may be due to urban drift of labour. About 52.5% of the respondents were within the age range of 21-Oyrs, an indication that farmers were still in their active age. It was also, observed form the result that men were actively involved in cocoyam production than the women. While, some of the farmers produce for domestic consumption others produce for commercial purpose, however, some produce for both purposes. The average educational level of the respondents is primary education with an average household size of 5. The study revealed that cocoyam production was profitable in the study area The cost and return analysis showed that cocoyam production was profitable in the study area. The cost and return analysis showed an annual average of 9,501 bags produced in one planting season and each bag of 50 kg sold at N500.

Key words: Cocoyam production profitability, economics, domestic consumption, educational level, Ekiti

INTRODUCTION

Food security is defined by FAO (1985) as the economics and physical access to food for all people at all times. This implies that food should be available throughout the year to sustain household energy and health and to meet nutritional requirements. The availability of food must be coupled with the ability of every household to acquire it. i.e., it must be available and affordable, especially to the poor.

The population explosion together with a poor distribution of food is among the world's great problem today. In Nigeria, production of food has not increased at a rage that can meet the increasing population. The growth of population in relation to farm output in developed countries is stable but there is no compensation for this by the total farm output in developing countries likes Nigeria. Therefore, the need to develop a sustainable food production level that is capable of meeting the increasing food demand in Nigeria is inevitable.

In order to solve the problem of food in security, there is the need to ensure supply of basic food stuffs at prices within the reach of the consumer. One major staple food, among the rural and urban dwellers, which much attention seems not to have been given, is cocoyam. Cocoyam production is subject to uncontrollable and unpredictable factors such as weather and diseases. The bulkiness of cocoyam and its high level of perishability make application of uniform standard for efficient marketing difficult (Banwo, 1982).

Onwueme (1978) found that, cocoyam usually contain good quality carhydrates, hence they are of great values as food for man and animals. The young leaves are eaten in Nigeria and some other West African countries as vegetables, they are valuable for livestock feed as well.

Corresponding Author: A.A. Adepoju, Department of Agric Economics and Extension,
Ladoke Akintola University of Technology, Ogbomoso, Nigeria

However, a crop with such potential has not received the kind of attention given to other crops such as cassava and grains. This trend has serious implication on food supply and farmers' income. This study therefore aimed at determining the socio-economic factors affecting cocoyam production and is profitability, estimating cost and returns of cocoyam production and identifying the constraints militating against production and its utilizations.

Problem statement: Food security is a widely debated development issue and yet remains a global challenge. Nigeria in 1996 along with 184 other countries at the World Food Summit made a commitment to reduce the number of chronically undernourished people by half by the year 2015. Despite this commitment and efforts at achieving this goal, most extreme depth of hunger is prevalent (more than 300 kcal/person/day) in Africa. The scenario of food security is appalling in Nigeria as the average calorie intake is only at the threshold of adequacy. Olayemi (1998) revealed that less than 38% of the population is food secure, with about 20% been severely undernourished. The depth of hunger in Nigeria also remained at 210 kcal/person/day while the diet composed of 64% cereals, roots and tubers.

In addition to the low calorie consumption, there has been a marked deterioration in the production performance of Nigeria's agriculture in recent years therefore, creating a demand-supply gap for food. Food is known to be critical to human development this is why it is specified under the millennium development goals that the population of food-insecure in Africa must be reduced by 25% by the year 2015. According to Nwosu (2007), Nigeria presently cannot meet up with both local and international demand for roots and tuber crops like cassava, yam, potato, coco-yam etc. and this therefore makes it not to be food secured since being food secured means having enough to feed the teeming population and excess to export to other parts of the world.

Arising from the foregoing, there is need to have a look into the production of one of the major roots and tuber crops in Nigeria which is fast becoming an extinction crop, i.e. coco-yam. This is due to the general believed that most families no longer consume it because it is not readily available for consumption even during its season, as a result of reduction in its production level. To increase food availability, production and household consumption of cocoyam should be encouraged putting into consideration its medicinal value for diabetic patients.

MATERIALS AND METHODS

The study was conducted in Ekiti East Local Government Areas of Ekiti State. Primary data were used for this study and they were obtained from 120 farmers that were randomly selected form 6 villages selected (randomly) from the Local Government Area. Twenty respondents form each of the selected communities were interviewed. Data were collected with the used of a structured questionnaire designed to obtain information on socioeconomic characteristics, operational expenses, production pattern, contrasts and output form the sampled farmers.

The analytical techniques adopted for the study include descriptive statistics, gross margin analysis and chi-square.

The gross margin analysis is given as:

$$GM = TR-TVC$$

Where,

GM = Gross Margin.
TR = Total Revenue.
TVC = Total Variable Cost.

RESULTS AND DISCUSSION

From the study, 52.5% of the respondents fall within the age range of 21-40 years, while 42.5% were between 41-60 years. This indicates that the respondents still posses the strength for farming. Majority of the farmers precisely 85% were male with only 15% female farmers. This shows that men are actively involved in cocoyam production in the study area than the women. The result further reveals from Table 1 that while 15% of the respondents had no formal education; majority of them (45.8%) only attended primary school. About 23.3 and 15.8% attended secondary school and tertiary institutions, respectively. Marital status, an important factor in production in terms of family labour indicates that 68.3% of the respondents were married while 15.8 and 15.9% were singles and separated, respectively.

Findings further reveals that 64% of farmers had a household size between 1 and 5 while, 32% had none and 24% had between 6 and 10 children. This result implies that the respondents have access to family labour and hence, this was expected to reduce the cost of production. About 42.5% of the farmers were purely engaged in farming activities while 57.5% engaged themselves in other income generating activities to meet up with the household socio-economic demands.

Table 1: Profit analysis using gross margin principle

Variables	Frequency	Percentage (%)
Ages		
21-40	73	52.5
1-60	51	42.5
Total	120	100.0
Sex		
Male	102	85.5
Female	18	15.0
Total	120	100.0
Level of education		
No formal education	18	15.0
Primary education	55	45.8
Secondary education	28	23.3
Tertiary education	19	15.8
Total	120	100.0
Marital status		
Single	19	15.8
Married	82	68.3
Separated	7	5.8
Divorced	5	4.2
Widowed	7	5.8
Total	120	100.0
Household size		
None	7	26.7
1-5	5	53.3
6-10	7	20.0
Total	120	100.0
Primary occupation		
Farming	51	42.5
Others	69	57.5
Total	120	100.0

Table 2: Profit analysis using gross margin principle

Variables	Frequency	Percentage (%)
Access to land		
Inheritance	93	77.5
Purchased/rented	2	1.7
Gift	25	20.0
Total	120	100.0
Farm size (hectares)		
Less than 2.0	36	30.0
2.1-5.99	70	66.7
Total	120	100.0
Production		
Subsistence	21	50.5
Commercial	28	23.3
Both	71	59.2
Total	120	100.0
Membership of cooperative society		
Yes	61	50.8
No	59	49.2
Total	120	100.0
Number of labour used		
One	37	30.8
More than one	83	69.23
Total	120	100.0
Use of fertilizer and chemicals		
Yes	18	15.0
No	102	85.0
Total	120	100.0
Source of fund		
Personal savings	55	45.83
Cooperative	28	23.33
Friends and family	24	20.00
Bank	6	5.00
Money lender	7	
Total	120	100.00

Table 3: Profit analysis using gross margin principle

Total Variable	Fixed cost	Total cost	Total revenue	Gross margin	Net revenue TR-TC
895,550	240,931	1,100,481	4,750,500	3,854,950	3,650,109

Table 4: Chi-square analysis of socio-economic characteristics of respondents

Variables	DTab	DF	Remarks
Income and age	8.759	7.78	0.67S
Income and sex	4.014	2.71	0.45S
Income and marital status	13.17	7.78	0.11S
Income and household size	1.671	4.60	4.34NS
Income and education level	1. 905	6.25	592NS
Income and farm size	17.84	6.25S	

Table 2 reveals the production activities of respondents, about 77.5% of the farmers acquired their farmland through inheritance while 20.8% sourced theirs through gift. Only about 1.7% purchased or rented the farmland used for cultivation. The easy accessibility to land will likely reduce cost of production and allow farmers to expand their scale of operation if they so wished. With respect to farm size, 30.0% of the respondents produce with hectare of land that is less than 2 while majority of them produce with 2 or more hectare of land i.e., 70.0%. Based on the number of hectare cultivated, about 17.5 and 23.3% farmers produced cocoyam for subsistent (domestic consumption) and commercial purpose, respectively while more than the average of respondents (59.2%) produced for both purposes. About 50.8% of the farmers were members of cooperative society while 49.2% were not. Cooperative society usually assists the farmers to form a force by which they could obtain inputs and credits with less difficulty among other benefits. To buttress this observation, about 23.0% of the respondents sourced funds for farm operation from cooperative societies while 45.83% used their personal savings. Five and 5.8% sourced funds from the bank and money lenders, respectively.

Table 3 presents the profit analysis of cocoyam production in the study area. It reveals that an enterprise producing cocoyam requires a large capital to take-off. However, the returns that accrue from the enterprise make it a worthwhile venture.

The chi-square analysis of the socio-economic characteristics presented by Table 4 shows that age, sex, marital status and farm size have significant relationship with income. The relationship that exists between age and income may be due to the fact that age has the direct link with years of experience a farmer has, the more the tendency to increase income generation from the farm.

The significant relationship between sex and income could be as a result of the fact that more men were involved in the production and they are physically

stronger that their counterparts. However, there is no significant relationship between income and both household size and educational level. Income may not be affected irrespective of the size of the household due to urban as youth migrate to cities thereby reducing the availability of labour on farmland.

Numerous problems were identified as militating against cocoyam production in the study area. These problems ranged from storage problems to increasing cost inputs, labour scarcity which may be as a result of migration of active group from rural area and general lack of technical know-how among the producing farmers. Also, the poor state of roads, which consequently lead to transportation problems, unavailability and use of chemicals and fertilizer, as well as problem faced from the action of migrant cattle rearers who graze over farmland or steal farm produce.

CONCLUSION AND RECOMMENDATIONS

The results of the analysis revealed that cocoyam production might be a capital intensive venture, nonetheless, it has a considerable level of profit. It is a good source of income and it create an opportunity for farmers to be gainfully employed thereby contributing to the well being of rural people. Government should assist the farmers by constructing good road networks for easy transportation in the rural areas. Provision of good storage facilities and educating the farmers on different ways of processing cocoyam through extension officers should also be encouraged. Credit should be made available to farmers in form of soft loans to enable them procure necessary inputs for production. Research efforts should be geared towards cocoyam production vis-a-vis soil testing appropriate fertilizer application and improved processing of cocoyam into storable product to maximize the total returns and potentials of cocoyam in alleviating food problems.

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