



FACTORS DECLINING CASSAVA PRODUCTION IN OGORI-MAGONGO LOCAL GOVERNMENT AREA OF KOGI STATE, NIGERIA

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ABSTRACT

The focus of this paper is to provide quantitative information on the factor declining the profitability of Cassava production in Ogori-Magongo Local Government Area of Kogi State, Nigeria. Using structural questionnaire, sixty farmers were randomly interviewed within Ogori-Mangongo metropolis in the 2006/2007 farming season. The data collected were analyzed using descriptive statistics and farm budgeting techniques. The result shows that the respondents were small scale farmers with no access to improved Cassava stem as well as credit facilities. Cost and return analysis revealed gross margin of N 4,375.30 per respondent and return to naira invested of N 0.37. The implication of this finding is that though the existing level of resources indicates some level of profitability, there is need to intensify production as well as create a viable market for the product.

Keywords: cassava production, cost analysis, budgeting techniques, profitability, declining factors.

INTRODUCTION

Nigeria grows Cassava than any other country in the world, its production is currently been put to about 34 million metric tons per year, the total area harvested in 2003 was 31 million hectares with average yield of about 11 tons per hectare (IITA 2005). The production of Cassava is concentrated in the hand of numerous small holder farmers located in the south and central regions of Nigeria.

In 2002, Cassava suddenly gained national prominence following the pronouncement of a presidential initiative. The intent of the initiative was to use Cassava as the engine of growth in Nigeria. To put Nigeria in the global context for competition, the country needs to upgrade the use of Cassava into primary industries such as starch, ethanol, chips and flour in order to provide an industrial base diversification of its national economy. Cassava can be used to improve rural and urban income and development in Nigeria if investment in the down stream sector or the industry is made more effective (Cassava Initiative in Nigeria, 2005).

Nigeria has the potential, particularly in terms of land and human resources needed to produce enough food for the country (Adesimi, 1992). To be self sufficient in food production, the problems of promoting the production of the most promising staple food crops in the country has to be tackled. One of the staple food crops which have the potential for pulling the country out of the present food crisis is Cassava. Cassava is known for its ability to produce appreciable carbohydrate yield on soil too poor to sustain the growth of other crops resistance to drought. The tuber peels and leaves constitute a very nutritive source of food for both human beings and animals. As for industrial purposes, Cassava is used for making bread while the fibers are utilized in the brewing of alcohol and also incorporated into animal feed formulations. Potentials also exist for the use of Cassava in the pharmaceutical industry. In spite of the advantages of Cassava production over other root crops, not much has

been done in that regard. This paper aimed at examining the profitability as well as the factors declining the production of cassava in Ogori-Magongo area of Kogi State.

METHODOLOGY

The study was conducted in Ogori-Magongo area of Kogi State, Nigeria. The study area is located in the middle part of the state and share boundary with Edo State.

Ogori-Magongo Local Government Area is known to have tropical savannah climate with distinct wet and dry season. The wet season ranges between the month of April to October and the dry season between November and March. The mean annual temperature varies between 27^oC and 37^oC. The soils in the study area are predominantly clay loam in texture. The major occupations of the inhabitants in the area include farming, education, with only few engaged in trading.

Two districts were purposively selected essentially on the basis of their potentials for root crop production; the districts selected are Ogori and Magongo. Sixty farmers were randomly selected in each district and interviewed using structured questionnaire. The data collected were analyzed using descriptive statistics and farm budgeting technique. The specific type of farm budgeting technique used was the gross margin analysis (GM). The GM is the difference between the gross farm income and the variable cost of production (Gross Margin is assumed to be equal to net farm income, this is because fixed cost is negligible in the study area).

The items of farm income conceived were sales of crop products. The variable cost considered is only that of labour as other variable such as cost of production inputs like seed, fertilizer (both organic and inorganic) and again chemicals were not used by the farmers in the study area. For this study however only variable cost was considered as the farmers are small scale farmers with



negligible fixed capital. The model used for estimating Gross Margin analysis can be represented by the equation:

$$GFI = \sum_{i=1}^n P Y_i Y_1 - \sum_{j=1}^m P x_j x_j - \sum_{k=1}^K f k$$

Where

GFI	=	Gross farm income
Y _i	=	Enterprise Product
Where i	=	1
PY _i	=	Unit price of the product
Y _j	=	Quantity of two variable input
Where J	=	i
Px _j	=	Price / unit of variable input
F _k	=	Cost of fixed input (which is negligible)
Σ	=	summation (addition) sign

Profitability index (return to Naira invested) was employed to explain the extent to which a naira invested into Cassava production contribute to the Annual Gross Margin. The return to naira invested into an enterprise is the ratio of Gross margin to total cost of production.

RESULTS AND DISCUSSIONS

The farmers in the study area are small scale farmers with an average of about one hectare of land. Most of the farmers (about 67%) were educated. 75% of the respondents were full time farmers and 87% were fully into Cassava production, more than half of the respondents inherited the land for farming and none purchased farm land, while others were gotten as gift.

All the respondents in the study area (100%) had no access to loan. Most of the farmer in the study area used both family and hired labour family, family labour were used mainly for planting and harvesting while hired labour were used for ploughing and weeding. All the respondents in the study area used local varieties of stem for planting and sold their Cassava in local markets. All

the respondents had no need for fertilizer application as a result of their fertile land.

Cost - Return Analysis

Gross Farm Income (GFI) was estimated using the 2006/2007 market prices of the inputs and outputs. Table-1 shows the result of the analysis of the costs and returns that occurred to respondents involved in Cassava production. The analysis revealed that only labour was estimated for the total variable cost of production as there were no costs incurred for inputs such as fertilizer, agrochemical and Cassava stems. The average total variable cost incurred by each of the respondents surveyed was 11, 958.00. No fixed cost was estimated in the analysis because none of the farmer purchase or rent farmlands.

The major components of the respondents total farm income are the sales of Cassava. The average income realized from the sales of cassava by each farmer was 16, 33.30 per respondent. The estimated annual gross margin, which is the difference between the total revenue and the total variable cost of production, was 4375.30. The annual net return to operating expenses (profitability index) was 0.37.

Indicating that the respondent earned N 0.37 on each naira invested in production, i.e. 37k for every 100k invested, implying that Cassava production in the study area though profitable, is less than 50% on invested capital. The observed level of profitability is however due largely to lack of variable market for Cassava, lack of access to credit facilities as well as the use of local stem varieties for its propagation. However, the average rate of return (defined as Gross Margin per hectare divided by total cost of production per hectare and multiply by 100) was found to negative when family labour was costed i.e. -15k for every 100k invested, implying that they were losing 15k for every one N1 invested. Therefore, the profitability of Cassava in the study is seriously on the decline.

**Table-1.** Cost and return analysis of mixed farming system per household.

Item	Cost/return (naira)	% Cost/return
Variable cost		
Family labour	not costed	(7230.15) (37.68)
Hired labour	11, 958. 00	100 (62.32)
Agrochemical	-	-
Fertilizer	-	-
Seed	-	-
Total variable costs (a)	11, 958. 00	(19, 188.15) 100 (100)
Fixed cost (b)		
Depreciation	-	-
Rent on land	-	-
Total cost (a + b)	11, 958.00	(19,188.15)
Returns		
Crop sold	16, 333. 00	100
Total farm income	16,333.00	100
Net return (GFI - TVC)	4375.30	(2,854.85)
GFI/TVC	0.365	(-0.148) 37 (-14.8%)

Source: Field Survey, 2007

Figures in () - Family labour when costed

CONCLUSIONS

The profitability of Cassava production in the study area is on the decline and is diminishing in returns. It was found to be unprofitable with negative (low) return to operating expenses when labour was costed. The observed negative margin could be due to the use of local varieties of Cassava stem and lack of viable market. However, there is need to intensify the use of suitable improved stem and credit facilities. This combined with a viable market for Cassava would lead to a sustainable production of Cassava thereby increasing its profitability.

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