Level of Gross Margin among Vegetable Farmers in Iwo Zone of Osun State Agricultural Development Project

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Abstract-The study examined the level of gross margin in vegetable production. Case study of Iwo zone of Osun State Agricultural Development Programme (ADP). The main aim of this study is to determine the factors contributing to gross margin of the farmers. Data for the study was collected by administering of 150 questionnaires to vegetable farmers selected through Multistage sampling process. The studies found that majority of the vegetable farmers are between the ages of 46-50 years about 62.7% of the vegetable farmers had no formal education. Also 37.3% of the vegetable farmers had over 13 years of farming experience. The mean gross margin, total revenue and total cost of the vegetable farmers are N3, 159.13, N33979.47 and N4918.67 respectively, which shows that the level of gross margin is low among the farmers. Agricultural support activities should be given to the farmers by the government. Also extension agents should be well motivated to give advisory services on better vegetable practices and the farmers are inefficient in the use of their resources in Cassava production in the area. Therefore, more variable resources should be employed in order to achieve maximum output from Cassava production and increase their profit margins.

Keywords: vegetable production, gross margin, agricultural development programme, extension agents.

1. INTRODUCTION

Productivity has been a key issue for agricultural development strategies for many years because of its impact on economic and social development of nations. It is generally believed that the surest means through which mankind can raise itself out of poverty to a condition of relative material affluence is by increasing his productivity. Agriculture posits a huge potential for vegetable farmers to improve their livelihood activities through prompt advisory and agri-support activities. Vegetables are nourishing foods because they contain a little of all the essential nutrients man needs, including protein, mineral, salt, sugar, vitamins, aromatics, coloring agent, irons and essential oil that increase resistance to diseases in humans [2]. Growing of vegetable could make an important contribution to the national food supply and market gardening industry is a safeguard against the lowering of health standards necessary for productive output in an expanding economy [3]. There is therefore the urgent need to intensify the production of vegetables in Osun State and Nigeria in general, especially during the dry season which is usually the period of scarcity of this important farm produce.

Therefore, it is however important to note that increased agricultural productivity would help in attaining the needed food security. One of the often suggested strategies for increasing this productivity is a combination of measures designed to increase the level of farm resources as well as make efficient use of resources already committed to the farm sector [1]. According to, [10], fruits and vegetable handling with their transportation system in Nigeria seem not inadequate for enhancing profitable farming of fresh fruits and vegetable production. Vegetable farmers are helpless with inherent problems. However, there is room for improvement in the system so as to ensure
deliverance of quality product, reduce the losses to perishability and promote markets both locally and internationally for these produce.

[8], found out that in Nigeria, vegetable production has been ongoing for decades, providing employment and income for the increasing population especially during the long dry season. Vegetable production in Nigeria is characterized by the use of crude implements and non availability of inputs, illiteracy, expensive and complex technologies. [4]. Various constraints bedeviled by the farmers include, non-availability of credit, low produce price, high cost of improved inputs, non-availability of land, lack of extension advice, shortage of irrigation water, pests and diseases which may impact negatively on the farmers gross margin. This study intends to achieve the following specific objectives: to examine some socio-economic characteristics of the vegetable farmers and estimate the level of gross margin among the vegetable farmers in the area.

II. MATERIALS AND METHODS

A. Study Area

The study area was Iwo zone of Osun State Agricultural Development Programme (ADP). There are seven local government area in the zone namely; Iwo, Irepowle, Ejigbo, Ayedire, Ayedadae, Isokan, Ola-Oluwa. The vegetable farmers are concentrated in the rural areas of the zone. Iwo zone has an area of 245km2 and a population of 120,919 people (5). People of Iwo zone are primarily of Yoruba descent and the zone’s primary economic activity is agriculture with the primary crops being cocoa, yam, corn, cassava and vegetable. The geographical and topographical characteristics of the zone favor vegetable production.

B. Sampling and Data Collection

Multistage sampling technique was employed in the selection of representative sample for the study. The first stage involves the random selection of Iwo zone from the three (3) Agricultural zones in Osun State. The second stage involves the simple random selection of three (3) local governments, namely; Iwo, Olaoluwa and Ayedire Local Government areas. Two farming communities were randomly selected from each of the selected local government area. Twenty five respondents were randomly selected from each of the community selected from the list of registered farmers obtained from Iwo Zone Agricultural Development Programme to make up one hundred and fifty (150) sampled vegetable farmers. Structured interview schedule was used to obtain information from the farmers.

C. Analytical Technique

The data collected were analyzed using descriptive statistics (frequency distribution and percentages) for the socio-economic characteristics of the vegetable farmers. Also, the difference between Total Revenue and Total Cost (TC) makes up the Gross Margin (GM). It evaluates the gross profitability of vegetable farmers. It is useful where
the value of the fixed cost is negligible as it is the case with vegetable production which is operated mostly at small scale level (5).

Therefore, Gross Margin is given as:

\[ GM = TR - TVC \]

Where,

\[ GM = \text{Gross Margin} \]

\[ TR = \text{Total Revenue} \]

\[ TC = \text{Total Cost}. \]

III. RESULT AND DISCUSSION

One of the objectives of the study is to examine the socio-economic characteristics of the vegetable farmers in the study area. The selected socio-economic factors that were considered are, Age, marital status, farming experience, years of formal education, land acquisition. They are discussed below:

D. Distribution of Socio-Economic Characteristics of The Respondents

Table 1 shows that the majority of the vegetable farmers are between the ages 46-55 years with a mean age is 46 years. This implies that bulk of vegetable farmers is of middle age. [5] Supported this finding that young and middle aged people are the most active in agricultural production activities for increased productivity. Majority (82.0%) of the vegetable farmers are married. This implies that many of the farmers involve their spouses and children for labour in vegetable farming. Less than half (38.0%) of the respondents have more than 13 years experience in cultivation of vegetable. This depicts that not many of the respondents have long years of experience in vegetable production. It may plausibly be as a result of the constraints faced by the farmers in vegetable production is not as much as the constraints they encounter in other crop production in the study area. Less than half (39.3) sourced land for vegetable production through rent. This shows that the vegetable farmers cannot easily access land for vegetable production. Rent as the most pronounced form of land acquisition could likely prone vegetable farmers to marginal profit since the profit on production and sales of produce is shared with the land owners.

TABLE 1

<table>
<thead>
<tr>
<th>Variable</th>
<th>frequency</th>
<th>percentage</th>
<th>mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td></td>
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</table>
Table II shows the result of the gross margin of the vegetable farmers as, minimum levels of gross margin ₦100 and maximum level of gross margin ₦9300 respectively. The mean gross margin from the vegetable production in the study area is ₦3159.13. This implies that the economic return to farmers on vegetable production is low. The minimum and maximum total revenues (TR) accruing to the farmers from vegetable production are ₦13200 and ₦55800 respectively. The mean total revenue (TR) among the vegetable farmers in the study area is ₦33979.47. The results show that there is low revenue from vegetable production which invariably reduces the gross margin. The minimum and maximum total cost (TC) incurred by vegetable farmers are ₦3500 and ₦16500 respectively. The mean total cost (TC) is ₦4918.67. This result indicates that the cost of production among the vegetable farmers is high which accounts for their low revenue and consequently low gross margin.

<table>
<thead>
<tr>
<th>Cost (₦)</th>
<th>Gross Margin (₦)</th>
<th>Total Revenue (₦)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>3159.13</td>
<td>33979.47</td>
<td>4918.67</td>
</tr>
</tbody>
</table>

E. Level of Gross Margin Analysis

The minimum and maximum levels of gross margin ₦100 and ₦9300 respectively. The mean gross margin from the vegetable production in the study area is ₦3159.13. This implies that the economic return to farmers on vegetable production is low. The minimum and maximum total revenues (TR) accruing to the farmers from vegetable production are ₦13200 and ₦55800 respectively. The mean total revenue (TR) among the vegetable farmers in the study area is ₦33979.47. The results show that there is low revenue from vegetable production which invariably reduces the gross margin. The minimum and maximum total cost (TC) incurred by vegetable farmers are ₦3500 and ₦16500 respectively. The mean total cost (TC) is ₦4918.67. This result indicates that the cost of production among the vegetable farmers is high which accounts for their low revenue and consequently low gross margin.
IV. CONCLUSION

The study shows that most of the vegetable farmers are middle aged (46-50 years) and rented land for farming (39.3%) as the major source of farm land acquisition. The mean total cost and total revenue are ₦4918.67 and ₦53979.47 respectively, accounting for low revenue of the vegetable farmers. Therefore, more variable resources should be employed in order to achieve maximum output from Cassava production and increase their profit margins. It was then recommended that agricultural support activities should be given to the farmers through prompt delivery from the allocated agro-inputs companies by the government and extension agents should be well motivated to give advisory services on better vegetable practices for enhanced farmers’ sales of vegetable produce. Also vegetable farmers are operating in stage one of the production process. Therefore, the farmers are inefficient in the use of their resources in Cassava production in the area. Therefore, more variable resources should be employed in order to achieve maximum output from Cassava production and increase their profit margins.

REFERENCES