Profits Analysis of Organic and Non-Organic Fluted Pumpkin among Small Holder Farmers in Cross River State of Nigeria

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ABSTRACT
The study analyzed the profit of organic and non-organic farming among small holder fluted pumpkin farmers in Cross River State. A multistage sampling technique was employed in the selection of location and respondents. The data were collected from 240 organic and non-organic small holder fluted pumpkin farmers. The primary instrument used for data collected was structured questionnaire. Data obtained was analyzed by Enterprise budgeting method. Results indicated that the profit realized by organic fluted pumpkin farmers in Cross River State was ₦260,060, while that of non-organic (conventional system) was ₦187,360 per farmer per one hectare.

Keywords: Profit, Organic Farmers, Non-Organic Farmers, Fluted Pumpkin, Small Holder farmers.

INTRODUCTION
Fluted pumpkin (Telferia occidentalis) is a major grown vegetable in Cross River State of Nigeria, and among the cheapest vegetables for cultivation and of high demand all through the year. Its affordability and the nutritive value make it an important diet to the populace [1]. It produces fruit and have abundance leaves all over the stem [2]. It is a source of vitamins which include vitamin C, B1, B2, E and K, with some minerals including magnesium, potassium, calcium, iron, zinc, sodium, phosphorous and fibers [3]. Fluted pumpkin production is encouraging to farmers because the returns from the farm does not take much duration like other crops. The method of technology for production depends mainly on the decision and financial capacity of the farmers, whether to embark on Organic or non-organic [4].

Objective of the study
The broad objective of this study is to analyze the profits of organic and non-organic fluted pumpkin among small holder farmers in Cross River State. Specifically, this study seeks to:

i. analyze the profits of organic and non-organic fluted pumpkin production

Null Hypothesis (H0): There is no significant difference between the profits of organic and non-organic fluted pumpkin production in the study area.

METHODOLOGY

Area of the Study
The study was carried out in Cross River State in South-South geopolitical zone of Nigeria. Cross River State is a coastal state in south-south Nigeria. It occupies 20,156 square kilometers. It shares boundaries with Benue State to the North, Ebonyi and Abia State to the west, to the east by Cameroon Republic and to the south by Akwa-Ibom and the Atlantic Ocean. Its capital is Calabar. The estimated population of about 2.89 million people (NPC, 2006) with a unique and rich cultural heritage. Ejagham and Efik are the major languages of this state, but the Igbo tribe and language are also present in its western land borders. The state belongs to tropical rainfall belt where
rainfall is usually seasonal and at times very heavy. Humid tropical climate of about 1300, 3000 mm rainfall and 30°C mean annual temperature prevail over the state [5].

**Sampling Technique and Sample Size**
The list of registered organic and non-organic fluted pumpkin farmers in the state was obtained from ADP Cross River State which comprises of 3251 (2200 Organic and 1051 non-Organic). A multistage random sampling technique was adopted in the selection of states, agricultural zones, local government areas, communities and respondents in the study area.

**Stage one**, two Agricultural Zones were randomly selected from the three zones in the state. These were Ogoja Zone and Ikom Zone.

**Method of Data Analysis**
Enterprise budgeting method were the statistical tool used for the study. Thus, the enterprise budgeting method is stated as:

Enterprise budgeting method

Enter **prise budgeting method**

The enterprise budgeting method used in the determination of enterprise profitability is given as:

\[
\text{NR/NI} = \frac{\text{TR} - \text{TC}}{\text{GM}} = \frac{\text{TR} - \text{TVC}}{\text{TR} - \text{TVC}}
\]

Where:
\[
\begin{align*}
\text{NR/NI} & = \text{Net returns/Net income} \\
\text{TR} & = \text{Total revenue (Q x Pq = Quantity of output x its unit price)} \\
\text{TC} & = \text{Total cost (TVC + TFC)} \\
\text{TVC} & = \text{Total variable cost (Xi. Pi = quantity of variable inputs x unit price of the inputs)} \\
\text{TFC} & = \text{Total fixed cost (Annual depreciation values of FC items and rental value of land)} \\
\text{GM} & = \text{Gross margin.}
\end{align*}
\]
RESULTS AND DISCUSSION

Table 1: Difference between means of profits of organic and non-organic farmers in Cross River State

<table>
<thead>
<tr>
<th>Technology</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organic</td>
<td>80</td>
<td>260,060.7854</td>
<td>125789.5689</td>
<td>35671.5789</td>
</tr>
<tr>
<td>Non-organic</td>
<td>160</td>
<td>187,360.5689</td>
<td>589647.4457</td>
<td>12589.3352</td>
</tr>
</tbody>
</table>

One-Sample Test

<table>
<thead>
<tr>
<th>Technology</th>
<th>T</th>
<th>Df</th>
<th>Sig. (2-tailed)</th>
<th>Mean difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organic</td>
<td>19.335</td>
<td>79</td>
<td>0.000</td>
<td>260,060.7854</td>
</tr>
<tr>
<td>Non-organic</td>
<td>29.127</td>
<td>159</td>
<td>0.000</td>
<td>187,360.5689</td>
</tr>
</tbody>
</table>

The results showed that the mean profit realized by organic fluted pumpkin farmers in Cross River State was N260,060 while that of non-organic (conventional system) was N187,360. A mean difference of N72,700 was computed. The result of Difference between profits of organic and non-organic (conventional system) fluted pumpkin production in Cross River State.

Table 2: Difference between means of profits of organic and non-organic farmers in the study area

<table>
<thead>
<tr>
<th>Technology</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organic</td>
<td>80</td>
<td>1,331,120.4587</td>
<td>235987.7541</td>
<td>69874.6532</td>
</tr>
<tr>
<td>Non-organic</td>
<td>160</td>
<td>623,624.6589</td>
<td>854621.7512</td>
<td>69862.7584</td>
</tr>
</tbody>
</table>

One-Sample Test

<table>
<thead>
<tr>
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<th>T</th>
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<td>29.127</td>
<td>159</td>
<td>0.000</td>
<td>623,624.6589</td>
</tr>
</tbody>
</table>

The results showed that the mean profit realized by organic fluted pumpkin farmers in Cross River State was N1,331,120 while that of non-organic (conventional system) was N623,624. A mean difference of N707,496 was computed. The result of One Sample test in table 2 indicated a significant difference between the means in favour of organic fluted pumpkin production, implying that organic fluted pumpkin production was more profitable than non-organic in the study area.

CONCLUSION

The mean profits of organic fluted pumpkin in Cross River States N1,331,120 and non-organic was N623,624. Meaning that organic fluted pumpkin production was more profitable in Cross River State. Organic fluted pumpkin production was a profitable enterprise and non-organic fluted pumpkin production was also profitable though less profitable than the organic in Cross River State. The farmers should be strong in thrift contribution in cooperative societies to enable them have access to credit for efficiency, exchange ideas on latest and appropriate technologies, adopt better marketing strategies and thus make more profit.
REFERENCES


