Economic Analysis of Maize Production in Kano State

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Abstract

This research is an attempt to analyse the contributions of maize production in Kano state to Nigeria economy. Simple random sampling technique was employed to select three hundred and twenty maize producing farmers for the study.The main objectives of the study are to: Identify the socio-economic characteristics of maize farmers in the study area; determine the cost efficiency and profitability of maize farmers in the study area; assess the contribution of maize production to the economy of the study area; and identify the major challenges of maize production in the study area. Data for the study were collected using structured interview schedule and questionnaire and analyzed using descriptive statistics and regression analysis. The result showed that mean age for respondents was 50 years while less than half of them were literates.

Keywords: Economic Analysis, Maize Production, Kano State

Background of the study

Maize is a major cereal and one of the most important food crops in Nigeria. Its genetic plasticity has made it the most widely cultivated crop in the country, from the wet evergreen climate of the forest zone, to the dry ecology of the Sudan savannah. Being photoperiod sensitive, it can be grown anytime of the year giving greater flexibility to fit into different cropping patterns. Dominant cereal crops in the southern and northern Guinea and Sudan savannas It is one of the major crops grown in Kaduna State. (Onyibe et al., 2006). Maize crop belongs to the grass family (Poaceae). It is ranked first as the most important cereal crop in sub-Saharan Africa. It provides food for more than 1.2 billion people in addition to other uses. Nigeria with an annual production of close to 8 million metric tons in 2013 is the largest producer in Africa. Maize is the third most widely grown crop in Nigeria, following sorghum and millet. It is highly productive, cheap, less rigorous to produce and adapts to wide range of agro ecological zones (Babatunde *et al.*, 2008)

Akinwumi Adesina 2012 has said that with the Agricultural Transformation Agenda, was expected that maize will add N200 billion to the nation's Gross Domestic Product (GDP).

Maize and other cereals constitute important sources of carbohydrates, proteins, vitamin B and minerals (Iken et al, 2002). Maize is a stable food crop for most sub-Saharan Africans of which Nigeria is inclusive with per capital kg/year of 40 (FAOSTAT 2003). In Nigeria maize is the third most important cereal crop after sorghum and millet (Ojo, 2000), the demand for maize as a result of various domestic uses shows that a domestic demand of 3.5 million metric tonnes outstrips supply production of 2 million metric tonnes (Akande, 1994).

Objective of the Study

The general objective of the study is to analyse the economic analysis of maize production in Kano state, Nigeria and the specific objectives are:

I. Identify the socio-economic characteristics of maize farmers in the study area;
II. Determine the cost efficiency and profitability of maize farmers in the study area;
III. Assess the contribution of maize production to the economy of the study area; and
IV. Identify the major challenges of maize production in the study area

Method of data collection

Maize farmers are the target respondents for the study. Data were collected using structured questionnaire administered by trained enumerators. The information collected was on sex, age, marital status farm size, educational status and family size based on 2016 farming season. The survey was conducted in April 2016.

300 maize farmers were selected from the study area and were used for the study. The sampling technique employed is the Simple random sampling technique through random selection maize farmers in the study area randomly. The second stage involved simple random sampling through random selection of 300 maize farmers in the study area.

Data Analysis

The data obtained from the field were subjected to analysis using descriptive statistics and correlation analysis, which was used to test for the relationship between the dependent variable (Nigeria's economy) and the independent variable (Agricultural Production)

Study area

This study was carried out in Kano State. The state is situated in the North West region of Nigeria. The North West consists of Kaduba, Zamfara, Sokoto, Kastina Kano State was created on October 1st, 1996. It is composed of forty four (44) Local Government Areas. Its capital is Kano, an urbanized town with a very large emirate. Kano State is a home to an amalgam of ethnic nationalities. Prominent among these are the Hausa, Fulani, and so on. There is also a pronounced presence of settlers (non-natives) from the different parts of the country in the state. Nasarawa State lies within the Savanna grassland region of Northern Nigeria. The climate of Kano is typical dry and wet climate. Annual rainfall is about 850 – 870mm. The temprature is averagely warm to hot throughout the year at about 270C (Olofin and Tanko, 2002).

Results and Discussion

Socio-economic characteristics of maize farmers

The demographic data examined in the study are the distribution of respondents by gender, age, household size, education, farming experience, extension contacts, and sources of information, membership of association, credit facilities and labour force.

Gender

The result of the analysis showed 80% of households were headed by males and 20% were female headed in the study area. The result is in agreement with findings of Yanguba (2004) who reported that 96% of farm households surveyed in Katsina State were male headed. This result shows that men are more involved in maize farming. Because of the influence of tradition and religion women are generally restricted to their compounds.

Age

Results from the study show that majority which constitute 50% of the farmers were between the ages of 30-50. 40% of the respondents were aged 51-70 years while 10% were aged above 70. The average age of respondent was 48 years which showed the farming population in the study area generally is relatively young. This means that there is an active labour force available for farming.

Household size

Result from the study shows that about 70% of responding households had not less than seven members. The average household size in the study area was 8 persons per household. Household size determines the available human labour force that can be employed in carrying out farming activities. Idrisa (2009) in his findings recorded an average of seven persons per household. This implies that the households generally have a reasonable number of availability of household labour supply.

Educational Level

The result shows that 11% of the respondents had no formal education, 21% had primary school education, 17% had secondary school education, 19% had tertiary education and Islamic education had 32% which is the highest. The Educational level of the household tend to be one of the reason why they are able to produce maize in large quantity due to increases the ability to assess, interpret, and process information about a new technology, From the result majority of respondents had Islamic education. This is due to the fact that the study area is a predominantly Muslim community where Islamic knowledge is given a high priority. High level of formal education in a study area would mean that majority of farmers are expected to accept new technology and also assess information easily.

Farming experience

The distribution of respondents based on years of farming experience shows that 30% of maize farmers in the study area had experience in maize production from 1 and 15 years, 35% had been producing maize for 16 and 25 years 45% had experience for Above 25years The mean years of experience for the farmers were 20 years. This implies that majority of maize farmers had long period of farming experience and therefore would be conversant with constraints to increased maize production. Bello et al. (2012) found out that most (84%) of the respondents in Jenkwe Development Area of Nasarawa State, Nigeria had above 10 years of farming experience. Years of experience in farming were important because management skills of farmers improved with experience.

Cost Efficiency and Profitability of Maize Farmers in the Study Area

The finding on the costs and profitability of maize production in the study area revealed that the total variable cost was N30,500 which represents about 95% of the total cost of production while depreciation on fixed cost was N900.50 representing about 5% of the total cost. Hence the total cost (TC) of farming per hectare was N38,500 (TVC + TFC). Total revenue, gross margin and farm income were N60,500, N30, 100 and N25,500

respectively. The average cost per kilogram shown that N23 was used to produce 1kg maize while the average revenue per kilogram shows that N50 was generated as revenue from selling 1kg of the maize produced. Return on naira invested by the Maize farmer's shows that for every one naira invested, N2.20 was gained. This means that 120% profit was made.

Ways in which Maize Production can contribute to the Economy
The study identified some Ways in which Maize Production can contribute to the Economy which is as shown in Table 1 below:

Contributions	Frequency	Percentage
Provision of food for man and animals	298	99.3
Provision of employment	123	41
Raw material for livestock feed	78	26
Increases income and savings of the farmers	75	25
Boost farming activities in Kano State	54	18
Increases the internally generated revenue of the Study area	51	17
Encourages the state government to invest more in agriculture	43	14.3

Major challenges of Maize Production in the Study Area
The major constraints militating against maize production in the study area as identified by the study is as shown in Table 2 below:

Challenges	Frequency	Percentage
Inadequate Credit	221	73.67
lack of funds	189	63
Unavailability of irrigation facilities	102	34
climate change	56	18.67
problem of pest and diseases	45	15
problem of land tenure system	34	11.33
Lack of adequate processing facilities	21	7

Conclusion
The study revealed that the respondents are very much into maize production with an average of 20 years experience, the maize farmers in the study area has contributed alot to the economy of the area and Nigeria economy at large, The study further identified some constraints and challenges faced by maize farmers in the study area which the major factor is lack of access to credit.
   This implies that the government should focus more on credit facilities given to the farmers so as to boost the economy of the area and Nigeria at large through maize production.

Recommendations
Based on the findings of this study, it is recommended that:
Government should provide adequate credit facilities for farmers in the study area
Government should focus more on provision of irrigation facilities for better maize production in the study area
Government should subsidise the prices of herbicides and pesticides so as to help reduce disease infestation in maize farms in the study area.
Maize is a rescuer of the people at all times and should not be seen as a crop that is not necessary.

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