

Production and Profitability of Honey in Yewa North, Nigeria

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Abstract

The study examined the level of production, supply and marketing of honey in Yewa North Local Government Area of Ogun State. Some hindrance to honey supply and marketing were also identified. To achieve the aim of this study, fifty (50) questionnaires were distributed to five communities randomly selected in the study area. Ten questionnaires were administered in each community to collect data from beekeepers. The socio economic variables analysis revealed that 64% of the apiculturists were males while 36% were females. Up to 62% of the apiculturists were Christians while 36% were Muslims and 2% of them were neither Christians nor Muslims. Majority of the producers were in the range of 30-40 years. 4% of the honey producers were singles while 96% were married. NCE holders were 30% while 10% were degree holders. Fifty two percent of the apiculturists inherited the farmland while 9% purchased land. Top bars hive were used by 84%, while 6% used langstroth and 10% used other type of hives. Traditional method of beekeeping was used by 14%, while 86% used modern method of beekeeping. This study shows that 20% of the apiculturists chose beekeeping as their main occupation while 80% chose apiculture as secondary occupation. Only the sales of honey were used for the budgetary analysis. The cost analysis shows that the cost of hive which was 44.5% constitutes a large percentage of the total cost of honey production. The fixed cost was 91.5% of the total cost while the variable cost was 8.4% of the total cost of honey production in the study area. The profitability index was 0.6058 which implies that for every N1 sales, 60k was earned while the rate of return on investment and variable cost are 153.7286 and 1921.3. The gross margin and the net farm income are 300687.0 and 188567.4. The operating ratio is 0.0332 which means that the total variable cost is about 3.3% of the total revenue while the benefit cost ratio is 2.5651 which imply that the risk of running at a loss if invested in the enterprise is very minimal and the probability of making profit is high.

Keywords: Marketing, Honey production, Demographic index, Profitability rate.

Introduction

Apiculture is the practice and management of bees in a hive in such a way that it's developmental stages will be observed and can be manipulated. (Oyeleye, 2003). Human, have kept bees for the production and harvest of honey since 4,000 B.C (Halil and Nuray, 2007). Africa is the original home of honey bee, *Apis mellifera*. Africa and other tropical countries in the Caribbean and Pacific therefore have highly appropriate habitat for bees. The common Africa honey bee in Nigeria is *Apis Mellifera adansonni* (Oluwaseun, 2009). Interest in bee keeping started with hunting and robbing of wild colonies in hollow cavities in trees and rocks. (Halil and Nuray, 2007). Until the 19th century,

when sugar cane became available, honey was the world most popular sweetener and today, it is still being used as cake, tea, jam and jelly sweeteners. (Babatunde *et al.*, 2007).

Bee keeping is a sustainable form of agriculture that can provide rural people with a source of much needed income and nutrition therefore they have economic reasons to retain the natural habitat or modify it to boost honey product because it has potentials to increase yield such as other agricultural products.(Babatunde *et al.*,2007).

World honey production was over 1 million Metric Tonnes (MT) in 1993 (FAO, 1993). Between the two basic market segments; table (direct consumption) and industrial (cosmetic, pharmaceutical, baking purpose), a major portion of the honey was sold as table honey. In 2003, China was the largest producer of honey in the world, producing over 310,756MT and consumed 146,112 MT. The average customs value was \$ 0.52/kg. The Chinese government encourage bee keeping as a means to supplement rural incomes. The U.S was the second largest producer with 77,110MT followed by Argentina. Argentina export over 90% of its honey and its the second largest exporter of honey behind China. On the world market, the U.S has a difficult time of competing. In order to compete against cheaper foreign honey, niche and specialty market for honey and other product have been successful developed in the U.S and Hawaii and further market needs to be developed to be competitive with lower priced honeys from China and Argentina. Although no world wax figure are available, the FAO estimate that approximately 17,000 – 30,000MT of wax was produced in 2003,although honey are produced in Nigeria but there is no fact and figure that can indicate the quantities of honey produced in Nigeria like the above mentioned countries.(Oluwaseun, 2009).

Materials and Methods

The geographical area selected for this study was Yewa North Local Government Area (LGA) of Ogun State in the western region of Nigeria. It is located in the derived savannah zone. Yewa North (LGA) of Ogun State is one of the twenty (20) Local Government Areas in Ogun State. It has a mean annual rainfall of about 1200mm and a mean monthly temperature of 10⁰C – 24⁰C during rainy season and 30⁰C-35⁰C during dry season. Yewa North (LGA) is surrounded by Imeko /Afon (LGA) in the North, Yewa South (LGA) in the South, Republic of Benin in the West and also in the East, Abeokuta North (LGA) . Farming is their major occupation in this area but some farmers engage in Apiculture.

Primary data was collected using structured questionnaire from ten (10) randomly selected beekeepers from five (5) communities in Yewa North Local Government of Ogun State, which include Ayetoro, Igan –Okoto, Sawonjo, Ijoun, and Ibooro. The questionnaire was structured to elicit information on socio-economic characteristics of bee farm owners and workers and also access the cost and return on honey production. Level of honey available to be supplied to the market was also examined.

Descriptive statistics such as frequency distribution and simple percentages were used to present data. Profitability of honey production was determined using budgetary analysis.

Budgetary Analysis

$$GM=TR-TVC$$

Where

GM is the gross margin (#)

TR is total revenue (#)

TVC is the total variable cost (#)

$$NFI=TR-TC$$

Where

NFI is the net farm income

TC is total cost

$PI = NI/TR$

Where

PI is the profitability index

$RRI = (NI/TC)\%$

Where

RRI is the rate of return on investment (%)

$RRVC = (TR - TFC/TVC) \%$

Where

RRVC is the rate of return on available cost

TFC is the total fixed cost.

Results and Discussion

The socio economic variables analysis from table 1 revealed that 64% of the apiculturists were males while 36% were females. Up to 62% of the apiculturists were Christians while 36% are Muslim and 2% of them were neither Christian nor Muslim. Majority of the producers (72%) were in the range of 30-40 years old. This signified the youthfulness of farmers involved. 4% of the honey producers were singles while 96% were married. NCE holders were 30% while 10% were degree holders. Fifty two percent of the apiculturists inherited the farmland while 9% purchased land. Top bars hive were used by 84%, while 6% used langstroth and 10% used other type of hives. Traditional method of beekeeping was used by 14%, while 86% used modern method of beekeeping. This study shows that 20% of the apiculturists choose beekeeping as their main occupation while 80% choose apiculture as secondary occupation

Budgetary Analysis

The result of budgetary analysis for average beekeepers in the study area is presented in Table3. One revenue source was used in this budgetary analysis i.e. sales of honey production. The cost analysis shows that the cost of hive which is 44.5% constitutes a large percentage of the total cost of honey production. Pallot knife which is 0.5% also contribute small percentage of the total cost. The total revenue of the cost return of the honey production is #311220.0, the total fixed cost is 91.5% of the total cost while variable cost is 8.4% of the total cost of the honey production in the study area.

Profit analysis

The profitability index is 0.6058 which implies that for every N1 sales, 60k was earned while the rate of return on investment and variable cost are 153.7286 and 1921.3. The gross margin and the net farm income are 300687.0 and 188567.4. The operating ratio is 0.0332 which means that the total variable cost is about 3.3% of the total revenue, while the benefit cost ratio is 2.5651 which imply that the risk of running at a loss if invested in the enterprise is very minimal and the probability of making profit is high.

Conclusion and Recommendations

The study revealed that majority of the apiculturists in the study areas choose apiculture as secondary occupation which bring about uncommitted attitude to the job despite the fact that majority of honey producers in the study areas inherited the land they are using. The common land acquisition system in the study area reduces the fixed cost drastically thereby making apicultural practices more profitable to the honey producer in the study areas.

1. Apiculturist should be encouraged to take advantage of other products like propolis, royal jelly and bee wax to increase profitability of apiculture in the study areas.
2. Loan facilities should be provided to the apiculturist in the study areas to facilitate increase in scale of production.
3. Government should organize training and workshop seminars for the apiculturist in the study area for more effective knowledge in production of honey.

Table 1. Demographic distribution of respondents in the study area.

variables	Frequency	Percentages
20-30	7	14
31-40	22	44
41-50	14	28
50 above	7	14
Total	50	100
Male	32	64
Female	18	36
Total	50	100
Christian	31	62
Muslim	18	36
Other Religion	1	2
Single	2	4
Married	48	96
Total	50	100
0' Level	14	28
NCE	15	30
OND	13	26
Degree	5	10
Others	3	6
Total	50	100
Apiculture (only)	10	20
Others	40	80
Total	50	100

Table 2 frequency table of modes of sale of honey

Mode of sale	Frequency	Percentages
Retail	23	46
Wholesales	12	24
Both	13	26
Others	2	4
Total	50	100

Source: Field Survey, 2011

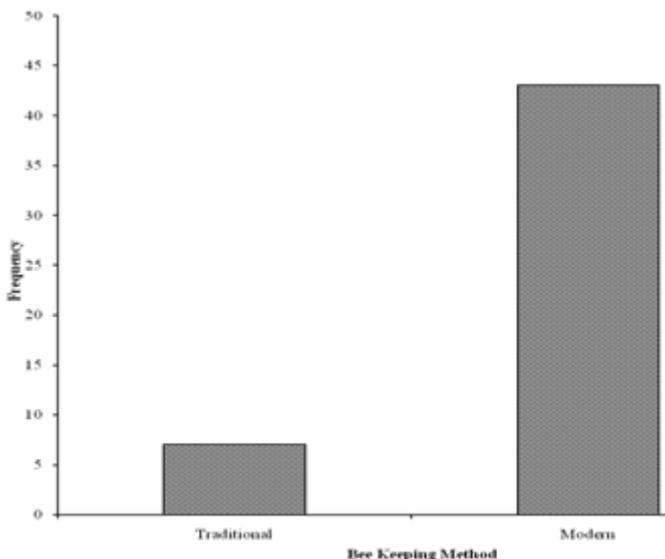


Fig. : Frequency distribution of bee keeping method in the study area

This chart illustrate that few apiculturist in the study area are using traditional method while majority are using modern method of beekeeping.2

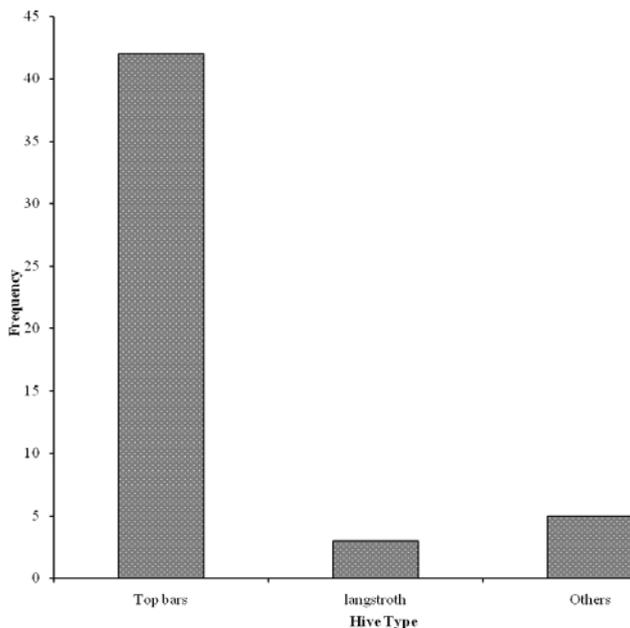


Fig. : Frequency distribution of hive types found in the study area

Table 4: Cost- returns structure for honey production

Characteristic	Amount (#)	percentage
Other equipment cost	2250.0	1.8
Hive total cost	54610.0	44.5
Protection suit total cost	15786.0	12.8
Head shield total cost	1018.0	0.8
Boot total cost	9958.0	8.1
Rubber glove total cost	2744.0	2.2
Hive stand total cost	25522.0	20.8
Pallot knife total cost	723.6	0.5
Cutlass total cost	3693.0	3.0
Beeswax cost	500.0	0.4
Propolis cost	500.0	0.4
Royal jelly cost	500.0	0.4
Storage cost	3833.3	3.1
Transport cost	1784.7	1.4
Total fixed cost	112305.6	91.5
Total variable cost	10353.0	8.4
Total cost	122658.6	
Total revenue	311220.0	

Table 4. Profit Analysis of honey production enterprise in the study area.

Characteristics	Value
Gross margin (TR-TVC)	300687.0
Net Farm Income (GM-TFC)	188561.4
Benefit Cost Ratio (TR/TC)	2.5651
Profit Index (PI)= NI/TR	0.6058
Rate of return on investment (NI/TC)×100	153.7286
Rate of return on variable cost (TR-TFC/TVC) ×100	1921.3
Operating cost	0.0332

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