

## RESEARCH NOTE

## A Study of Beekeeping Management Practices in Beekeeping Zones of South-western Region of Nigeria

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### ABSTRACT

*The acquisition of skill knowledge about beekeeping management practices is crucial for effective and efficient utilization of the technologies. The study was conducted in the southwestern region of Nigeria. Random sampling technique was used to select 200 respondents. The findings showed that independent variables such as education, years of experience and occupation were positive and significantly related with knowledge at 1% level of significance. But age, farm size, annual income, and distance to market location exhibited negative and significant relationship while gender, household size and number of hives in apiary had no significant relationship with the knowledge level of beekeepers. The result therefore, implies that education is an important factor in the variation of knowledge level. Also, the higher the beekeepers knowledge regarding innovation or technology, the more the tendency for full acceptability of that particular technology.*

**Key words:** *Relationship; Knowledge; Beekeepers; Characteristics; Management practices;*

Nigeria practices rain fed agriculture with irrigated land of 9570km<sup>2</sup>, arable land about 35 per cent; permanent pastures 44 per cent, forest and woodland 12 per cent and others 8 per cent. Cleaver and Shreiber (1994) put the surface area of Nigeria as 91.07 million hectares, 57 per cent of which is believed to be either under crops or pastures while the remaining 43 per cent is divided among forest, water bodies and other uses. The principal cash crops are cocoa, rubber and oil palm. Staple foods include rice, maize, sorghum, yams, cassava and millet including timber production (FMARD 2007). Notwithstanding, beekeeping as a viable agribusiness is still largely unexplored in Nigeria.

The art of beekeeping in easily maneuverable hives and extracting surplus stores of honey is called beekeeping. Beekeeping has many attractions among them are the production of honey, royal jelly, propolis, bee pollen and beeswax that are highly valuable and have high market prices. But most importantly honey serves as a source of food with high nutrition value. In communities, where beekeeping is done for commercial purposes, it has led to self-reliance through the innovation

of local industries associated with the production of beekeeping equipment and bee products. Beekeeping provides an excellent opportunity for studying bee pasture plants and the relationship of honeybees to flowers when bees are collecting pollen and nectar and when they are acting as pollinators. Beekeeping offers many income producing opportunities, either as a hobby, as a part-time occupation, or as fulltime commercial enterprises (Abrol, 2010). However, the management of bee hives and colonies as adapted to the seasonal nature of the woodlands and the semi-migratory habit of the honey bees requires adequate skill knowledge.

### METHODOLOGY

The study was carried out in beekeeping zones area of southwestern region of Nigeria. The list of practicing beekeepers was obtained through Osun State Beekeepers Association. Forty (40) respondents were randomly selected from each of the zones. Thus, constituting the total sample of 200 respondents for this study. A teacher made knowledge test as suggested by Anastasi (1961) was employed to measure the

knowledge level of the respondents on improved beekeeping management practices. List of knowledge items was prepared through a thorough discussion with experts in the field of agriculture extension, entomology and statistics. The independent variables such as age, gender, education, household size, farm size, annual income, years of experience, number of hives in apiary, distance to market location and occupation were the main factors of investigation. A pre-tested interview schedule and focus group discussion checklists were used to elicit information from the respondents. The data collected was tabulated and analyzed by using appropriate statistical tools.

## RESULTS AND DISCUSSION

*Age and knowledge* : Age was found to be negative and significantly related to the knowledge level of beekeepers. This inferred that the knowledge level of younger beekeepers was higher than old beekeepers. That is, aged people may have less or no interests to acquire more knowledge about improved beekeeping management practices. This finding is consistent with that of *Deshmukh (2013)*, *Shantha et al (2002a)*.

*Gender and knowledge* : The association between gender and knowledge level of the beekeepers was found to be negative and non-significant. This implies that both male and female beekeepers had similar knowledge level regarding improved beekeeping management practices.

*Education and knowledge*: Education exhibited positive and significant relationship with the knowledge of beekeepers. This being the fact that, literate farmers are more receptive and always in search of new information and technologies, which help them to improve on their socioeconomic conditions. This means that the higher educated respondents had high knowledge on improved beekeeping management practices. This is in conformity with the findings of *Karpagam (2000)*, *Kirankumar and Aski (2014)*, *Moulasab et al. (2006)* and *Kalaskar et al. (2001)*.

*Experience and knowledge* : A positive and significant relationship was observed between years of experience and knowledge level of the respondents. This infers that the farmers with higher experience had high knowledge about improved beekeeping management practices than those with low experience. This is corroborated with the research results of *Shantha et al (2002b & 2002c)*.

*Household size and knowledge* : Household size was found to be negative and non-significantly related to the knowledge level of the farmers. This implies that the farmers with different household size had different knowledge of beekeeping management practices. That is, regardless of number of household members the farmers are expected to have knowledge of improved beekeeping practices. This is confirmed by the findings of *Devalatha (2005)*.

**Table 1. Relationship between personal variables and knowledge**

Personal variables	Correlation coefficient 'r'
Age	-0.335**
Gender	-0.008 <sup>NS</sup>
Education	0.197**
Years of experience	0.183**
Household size	-0.104 <sup>NS</sup>
<i>Socioeconomic variables</i>	
Annual income	-0.221**
Farm size	-0.291**
Number of hives in apiary	0.052 <sup>NS</sup>
Distance to market location	-0.161*
Occupation	0.232**

\*\*Significant at 1% level of probability

\*Significant at 5% level of probability

NS = Non-significant

*Socioeconomic variables* :

*Annual Income and knowledge*: The relationship between annual income and farmers' knowledge level was found to be negative and significantly related. This means that the knowledge acquired by the respondents may be influenced by their annual income. Hence, those who have lower annual income may have strong desire to pursue more knowledge than the ones with higher annual income. This result is not in support of *Kharatmol (2006)*.

*Farm size and knowledge*: Farm size was found to be negative and significantly related to the knowledge level of the respondents. This inferred that farm size has an important relationship with the farmers' knowledge.

*Occupation and knowledge*: The major occupation of the respondents was found to be positive and significantly related to knowledge level. This implies that the respondents who had beekeeping as their major occupation were having more knowledge on improved beekeeping management practices than those combining beekeeping with another enterprise.

*Number of hives and knowledge*: A positive and non-

significant relationship was recorded between the number of hives in possession of the respondents and their knowledge level. Thus, the knowledge acquired by the respondents may have nothing to do with the number of hives in their apiary. Their knowledge level may be as a result of interaction with fellow beekeepers and previous experiences through training and seminars attended.

*Distance to market location and knowledge:* Distance to market location was found to be negative and significantly related to the knowledge level of the respondents. Beekeepers' knowledge level has a negative relationship with the distance to market location.

## CONCLUSION

The findings concluded that, the young beekeepers had more knowledge of beekeeping than the older ones,

and this could be good information in recommending a particular age for adoption of technologies in beekeeping management practices. However, since education is positively related to knowledge, then the educated ones among the beekeepers can have better understanding of the information learned from different sources than those who are not educated. Beekeepers with small farm size are likely to have interest in seeking adequate knowledge on beekeeping, as they were anxious to expanding their apiaries through knowledge gained. Then, the knowledge level of the beekeepers may be as a result of their past experiences in beekeeping because of positive relationship between knowledge and years of experience. Meanwhile, gender, household size, and number of hives were not related with the knowledge level and showed no variation in the acquisition of knowledge.

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