

INFORMATION SOURCES TO COCOA FARMERS ON INDEGENIOUS KNOWLEDGE UTILISATION AMONG COCOA FARMERS IN OGUN STATE

ABSTRACT

The study assessed information sources to Indigenous knowledge utilization among cocoa farmers in Ogun State. One hundred and fifty-two respondents were randomly sampled from two randomly selected communities in two local government areas of Ijebu North. Both primary and secondary data were used for the study. The data collected from the field was analyzed using descriptive statistics such as frequency and percentage distributions. Also, chi-square statistics were used in the data analysis for this study.

The result of the findings on personal characteristics of the respondents revealed that 50.6 percent of the respondents were within the age range of 41 – 60 years and 84.2 percent were male. Also, 67.1 percent were married. The findings also revealed that 74.2 percent had above five hectares of cocoa farm and 85.5 percent of the respondents got information about Indigenous knowledge through grandparents and parents. Some major constraints to the use of Indigenous Knowledge include high cost of Indigenous Knowledge, religious belief, inadequate information on Indigenous Knowledge and gender.

The result of chi-square analysis revealed a significant relationship between age and information source to IK utilization. Also, there is a significant relationship between sex and information source to IK utilization among cocoa farmers in the study area. It is therefore recommended that Cocoa farmers should be encouraged to practice indigenous knowledge. Also, efforts should be geared towards documentation of indigenous knowledge so that it can be transferred from generation to generation.

Key words: Farmer, Information source, Indigenous knowledge, cocoa, utilization

INTRODUCTION

Nigeria is one of the producers of cocoa beans in the world with Cote d'Ivoire being the highest. Other important producers are Ghana, Ecuador, Cameroon and Indonesia contributing to the enterprise (ICCO, 2020).

The crop serves as the single largest non-oil foreign exchange income earner, contributing significantly to the nation's Gross Domestic Product (GDP). It provides employment for over 200,000 households in Nigeria that grow cocoa (Popoola et al., 2015). Cocoa is the largest agricultural commodity that contributes 2% of the nation's export earnings. it is being grown in 14 states in Nigeria (NCDC, 2010).

Cocoa serves as an important crop around the world: a cash crop for growing countries and a key import for processing and consuming countries. Cocoa has a high food value because it contains as much as 20 percent protein, 40 percent carbohydrate, and 40 percent fat. It is also mildly stimulating because of the presence of theobromine, an alkaloid that is closely related to caffeine (international Cocoa Organization, 2012). Cocoa production over the years has declined due to neglect as a result of crude oil discovery in the early 1960s.

According to Ojo (2005), cocoa farmers abandoned their farms and shifted focus to other areas which adversely affected the cocoa industry; in the area of yield, marketing and price of cocoa, hence most cocoa plantations in Nigeria is characterized by the presence of old cocoa trees having very low yield.

In an attempt to solve the various problems associated with cocoa farming, cocoa farmers engage in indiscriminate use of chemicals such as insecticides, fungicides, and fertilizer, which have always led to environmental hazards and pollution. Instead of continuous usage

of chemicals in controlling the use of insects/ pests in cocoa and to boost production, farmers can practice indigenous knowledge techniques in cocoa production which is less harmful to farmers and the environment.

Indigenous knowledge is the unique knowledge confined to a particular culture or society. It is also known as local knowledge, folk knowledge, people's knowledge, traditional wisdom or traditional science. This knowledge is generated and transmitted by communities, over time, in an effort to cope with their own agro- ecological and socio-economic environments. It is generated through a systematic process of observing local conditions, experimenting with solutions and readapting previously identified solutions to modified environmental, socio-economic and technological situations. Indigenous knowledge is passed from generation to generation, usually by word of mouth and cultural rituals, and has been the basis for agriculture, food preparation and conservation, health care, education, and the wide range of other activities that sustain a society and its environment in many parts of the world for many centuries. (Sennayake S. G 2006)

There is a reservoir of valuable and largely untapped natural resources and indigenous knowledge that could be developed and used towards pests and disease control and to boost cocoa production in Nigeria (Okunlola et al 2013). Disease is the importance of indigenous knowledge in cocoa production. It is still under-utilized as many farmers still rely solely on the use of chemicals for cocoa production. Information on Indigenous Knowledge practices have been on decline due to lack of appropriate documentation and oral transfer of information from one generation to the next. (Owolabi et al 2015). It is also to be noted that indigenous information that is being lost could provide the basis for many scientific studies and solutions to problems of decline in cocoa production among farmers in Nigeria. It is to this end that this study is designed to answer the following questions.

1. What are the socio-economic characteristics of cocoa farmers in the study area?
2. What are the sources of information on indigenous knowledge (IK) utilization in the study area?
3. What is the cocoa farmer's perception of the effectiveness of Indigenous knowledge practices over modern technology?
- 4 What are the Constraints to the use of Indigenous Knowledge Practices among cocoa farmers in the study area?

Objectives of the study are to;

- 1-describe the socio-economic characteristics of cocoa farmers in the study area
- 2-examine sources of information by cocoa farmers on indigenous knowledge utilization
- 3-ascertain cocoa farmers' perception of the effectiveness of Indigenous knowledge practices over modern technology
- 4-identify constraints to the use of Indigenous Knowledge Practices among cocoa farmers

Hypothesis of the study

There is no significant relationship between socioeconomic characteristics of the respondents and the sources of information on indigenous knowledge utilization among farmers.

2. MATERIALS AND METHODS

Ogun State is one of the 14 cocoa producing states in Nigeria. Multistage sampling technique was used for this study. The first stage involved the selection of Ijebu-Igbo and Ago-Iwoye in Ijebu North Local Government Area in Ogun State, Nigeria. The selection was based on cocoa production because of the predominance of cocoa farmers. The second stage, Japara village,

was purposely selected in Ijebu-Igbo because records showed it is the highest producer of cocoa in the local government, while Oke-Ogbe was also purposely selected in Ago-Iwoye because of a high record in cocoa production. Third stage, simple random sampling was used to select seventy-six respondents from each of the villages, making a total size of 152 respondents.

2.1 Measurement of the Variables

Respondents' perception of the effectiveness of Indigenous knowledge practices over modern technology: The respondents were presented with a list of eight perceptual statement. It was measured on a 5 –point, like-scale of 'Strongly disagree', 'Disagree', 'Undecided', 'agree' and 'Strongly agreed' with scores of 0, 1, 2, 3 and 4 assigned respectively. The mean score for each perceptual statement was obtained and a grand mean calculated. Therefore, any mean score that is less than or equal to grand mean implies disagreement, while any mean above grand mean implies agreement.

Constraints to indigenous knowledge utilization by farmers: A list of nine perceived constraints was developed and respondents were asked to indicate which of the constraints affects them according to its severity. It was measured on a 3-point scale of 'Not a constraint', 'Mild constraint' and 'Severe constraint', with scores of 0, 1 and 2 assigned respectively. The mean score for each constraint was obtained and used to rank them in order of severity.

RESULT AND DISCUSSION

Socioeconomic characteristics of the respondents: Results in Table 1 revealed the mean age of the respondents to be 34 years. It means the respondents in the study area are still in their active age, they still have physical strength and energy to carry out farming work. The table also revealed 84.2% of the respondents are male while 15.8% of respondents are female. It means males dominated cocoa farming in the study area. This corroborates the findings of Olodipupo et al (2010) that farm work is skewed towards men because of gender inequalities. Male dominance could also be as a result of the tedious nature of cocoa farming, which can only be coped with by a man. A widened majority (67.1%) of the respondents were married while 19.7%, 7.9% and 5.3% of the respondents are single, widowed and divorced respectively. The implication of this is that marriage is highly cherished in the study area. Majority of the respondents were Christians (46.7%), 45.4% of the respondents were Muslims, while 7.9% were African traditionalists. More than half of the respondents (55.9%) had sizes between 1 to 5 hectares of cocoa plantation, 36.9% had between 6-10 hectares of land while only 3.3% had above 15 hectares of farm land. This implies that cocoa farmers in the study area are still small holders. Respondents with household size of between 1 and 5 persons were 25.6% ,47.3% had sizes of between 6 and 10 persons, while 26.9% had above 10 persons. This implies that farmers with large household sizes will help in terms of family labour.

Table 1: Distribution of respondents based on socio-economic characteristics N = 152

Variables Categories	Frequency	Percentage

Source: Field Survey, 2022.

Farming Experience of the respondents.

Farming experience of the respondents as shown in table1b reveals that 9.8% of the respondents had between 1to 10 years of farming experience while 15.1 % and 25.6% had farming

experience of between 11 to 20 and 21 to 30 years respectively. It was also revealed that a greater percentage (29.7) of the respondents had between 41 to 50 years of farming experience. Farmers with more years of experience in cocoa farming are expected to practice IK as the year of farming experience counts more than educational attainment.

Table 1b: Distribution of the respondents based on year of farming experience

Farming Experience	Frequencies	Percentage

Source: Field Survey, 2022.

Educational qualifications of respondents:

The results in figure 1 revealed that the educational status of the respondents is low. The majority of respondents (72.2%) did between attempting primary education and completing secondary education ,7.8% do not have any formal education, while few (19.7%) attempted and completed tertiary.

Figure 1 showing Educational qualification of the respondents

Source: Field Survey,2022.

Respondents’ source of information on indigenous knowledge utilization: It could be observed in Table 2 that a good number (85.5 percent) of the respondents obtained Information on Indigenous Knowledge practices from their grandparents and parents. This may be as a result of the close relationship that exists between parents and children and that indigenous knowledge is a local knowledge that can most of the time be gotten in an informal setting. Also, 5.9 percent of the respondents got it through friends and 5.8 percent got it through radio. The table also revealed that 0.7 percent of the respondents got it from television, 5.3 percent of respondents got it through extension agents. It further shows that 1.3 percent of the respondents got it from other sources. According to Famuyiwa et al (2015), information is the acquisition of knowledge on an interesting issue. Information-seeking behaviour is vital in agricultural development.

Table 2: Distribution of respondents by their source of information

Source of Information	Frequency	Percentage

Source field Survey 2022.

Respondents’ perception of the effectiveness of Indigenous knowledge practices over modern technology: From Table 3 it was shown that 32.2 percent strongly agreed that the use of Indigenous knowledge practices in cocoa farming is more effective than modern technology, 37.5 percent agreed, 9.2 percent were undecided, 9.2 percent disagreed and 13.8 percent strongly disagreed. The mean score is 3.15. This means that the respondents agreed that the use of IK in cocoa production is more effective than modern technology.

The table also revealed that 26.3 percent of the respondents strongly agreed that modern technology is costlier than Indigenous Knowledge, 54.6 percent agreed, 7.2 percent were

undecided, 5.3 percent disagreed and 6.6 percent strongly disagreed. The mean score is 3.89 i.e. respondents agreed that modern technology is costlier than Indigenous Knowledge.

About 28.3 percent of the respondents strongly agreed that Indigenous knowledge practices is more accessible than modern technology, 46.7 percent agreed, 9.2 percent were undecided, 7.2 percent disagreed and 8.6 percent strongly agreed. The mean score is 3.79 i.e. the respondents agreed that Indigenous knowledge practices is more accessible than modern technology.

As shown in the table, 7.2 percent of the respondents strongly agreed that Indigenous knowledge practices are more complex than modern technology, 6.6 percent agreed, 9.2 percent were undecided, 59.2 percent disagreed and 19.8 percent strongly disagreed. The mean score is 2.26 i.e. the respondents disagreed that Indigenous knowledge practices are more complex than modern technology.

Majority of the respondents (63.8 percent) strongly agreed that prolonged usage of modern technology has health hazards to farmers than Indigenous practices. 16.4 percent agreed, 7.2 percent were undecided, 3.3 percent disagreed and 9.2 percent strongly disagreed. The mean score is 4.22 i.e. the respondents agreed that prolonged usage of modern technology is more health hazard to farmers than Indigenous practices.

According to the table, 52.6 percent of the respondents strongly agreed that the use of Indigenous knowledge practices in controlling disease and pests has residual effects on cocoa beans like modern technology. 11.8 percent agreed, 7.2 percent were undecided, 54.6 percent disagreed and 28.9 percent strongly disagreed. The mean score is 2.03. This means that respondents disagreed that the use of Indigenous knowledge in controlling disease and pests has a resident effect on cocoa beans like modern technology.

Also, 52.6 percent of the respondents strongly agreed that the level of education of farmers does not have anything to do with the use of Indigenous knowledge and modern technology, 11.8 percent agreed, 16.4 percent were undecided, 9.9 percent disagreed and 9.2 percent strongly disagreed. The mean score is 3.89. That means the respondents agreed that the level of education of farmers does not have anything to do with the use of Indigenous knowledge and modern technology.

Table 3: Respondents' perception of effectiveness of Indigenous practices over modern technology

Source: Field survey 2022

Grand mean = 3.39

NB: Any mean score that is less than or equal to grand mean implies disagreement, while any mean above grand mean implies agreement

Respondent's Constraints to Indigenous Knowledge utilization: Table 4 shows that the most severe (major) constraints encountered by the respondents on IK utilization is the high cost of Indigenous Knowledge, with mean 2.64. The respondents are of the view that it will take time to get enough used torchlight batteries to be buried inside a cocoa farm. It is also tedious to get enough dead dogs and cassava slummy (fufu) to be buried inside a cocoa plantation in order to control termites. Also, farm size with mean 2.51 ranked 2nd in order of constraints to IK utilization. Farmers with large farm size will find it difficult to practise some of these indigenous knowledge activities. Religious belief with mean 2.35 ranked 3rd in order of constraints to IK utilization. The influence of Christianity and Islamism on our society has a great effect on traditional practices. Some believe that boosting production by local deities is by fetches. This

result corroborates with the findings of Guy B.N 2007 that religious belief has influenced agricultural performance. Inadequate information on IK with mean 2.13, gender with mean 2.12 and farmers experience with mean 2.11 ranked 4th, 5th and 6th in order of constraints to IK utilization. The age of farmers with mean 2.05 and the level of education attained with mean 2.03 also ranked 7th and 8th constraint to IK utilization