



SUSTAINABLE INFORMATION NEEDS OF CASSAVA FARMERS IN IBARAPA COMMUNITIES OF OYO STATE

¹Taiwo, A.O.; ²Adeniyi, R.T.; ¹Adebayo, O. A. and ¹Ajiboye, I.E.

¹Oyo state college of Agriculture and Technology, Igboora, Oyo State. ²Department of Agricultural Economics and Rural Development, Ajayi Crowther University, Oyo, Oyo State.

Correspondence Author: rt.adeniyi@acu.edu.ng

Abstract

Information is a crucial resource that is needed for sustainable production among cassava farmers. This study was carried out in Ibarapa Communities of Oyo state. A two-stage sampling procedure was used to select 120 respondents. Data on respondents' socioeconomic characteristics, sources of information, level of awareness on cassava production technologies, perception on the effect of lack of information and information needs of respondents were collected, using interview schedule. Data were analysed with descriptive (percentages, mean and weighted mean score) and inferential (Chi-square and PPMC) statistics at $\alpha 0.05$. Results shows that most of the respondents were male (55.8%) and educated (86.7%). The respondents' mean age, farming experience, farm size and household size were 45.36years, 23.13years, 2.76 hectares and 5.76 persons respectively. The respondents mostly sought information from fellow farmers (WMS=1.61) and farmers association (WMS=1.57), while the mostly aware cassava technology was recommended time (100%) follow by land preparation (98.3%). However, the respondents' perceptions towards the lack of information were poor marketing of agricultural produce (80%) and poor bank savings (76.7%) respectively. The respondents' information needs were on land preparation methods (WMS=2.46) and control of weeds (WMS=2.39) respectively. Significant relationship existed between respondents' information need and sex ($\chi^2=12.03$ $p=0.001$), religion ($\chi^2=45.15$, $p=0.000$), level of education ($\chi^2=19.26$, $p=0.000$), age ($r=0.19$, $p=0.02$), and farm size ($r= r=0.20$, $p=0.03$). The study concludes that literacy level, scope of production and age are favourable characteristics needed for seeking information in the study area.

Keywords: Information needs, Cassava production Technologies, Poor Marketing.

INTRODUCTION

Background of the Study

Information is an important tool that is required for sustainable development of the developing nations including Nigeria. The enormous role played by information in our daily life is so crucial that it goes hand in hand with empowerment in every sector of the economy including Agriculture; who needs information for actual transmission of technology that are meant to enhance all round agricultural production. However, the developmental information in Agricultural sector are technologies developed or discovered by the researchers for attaining sustainable agricultural productivity; especially for the cassava growers, who needs a lots of accurate, dependable and comprehensive information for bumper harvest (Olajide, Sanni, Atser, Dixton and Oladokun, 2021). Cassava has being one of the staple arable crops for food security for many household in the tropics. It is so important to the populace based on several benefits it offers to Cassava stakeholders across the value chain being the source of livelihoods, raw materials for industries and provision of food items (Gaari, Cassava

flour, Fufu, Tapioca and starch among others) that comes from it. According to Ikuemonisan, Mafimisebi, Ajibefun, and Adenegan (2020), cassava has being one of the major crop cultivated and has makes Nigeria to be ranked first among the nations that cultivates the crop. It is worth noting that cassava remains an industrial raw material to several industries both in Nigeria and in overseas, hence it is a crop with a great economic value to the producer, processor, marketers and the consumers (Ayegboyin, Yekinni and Adeniyi, 2020). Apart from the economic value that could attract farmers to the growing of cassava, it has been a hardy crops that can survive the adverse effect of climate and drought (Mbanjo, Rabbi, Ferguson, Kayondo, Eng, Tripathi, Kulakow, and Egesi. 2021).

Studies have shown that there are several sources through which information were been disseminated to Cassava farmers in the rural communities. These include fellow farmers, religion bodies, extension officers, traditional rulers, Radio, Television, Newspaper and Mobile phone among others (Olajide. *et al*, 2021). However, several

technologies exists for cassava farmers from the research institute like International Institute for Tropical Agriculture (IITA) and other scientists from National Root Crop Research Institute (NRCRI) with support from Harvest plus. Technologies like recommended time of planting, land preparation, recommended spacing, specific herbicides and pesticides, disease control technique, improved planting variety, planting method among others can enhance better productivity of cassava for its growers. For the technologies to be widely disseminated to the cassava growers with the aim of boosting their productivity, the government and non-governmental Organisation had come up with some interventions in some states in Nigeria including Oyo. These include management of the cassava mosaic disease (CMD), the cassava enterprise development project (CEDP) and the cassava bio fortification project (Dalberg, 2019 and Ayegboyin, *et al*, 2020).

It is worth nothing that with the several information sources available to farmers as well as numerous valuable research outcomes at the agricultural research institutes in Nigeria. The cassava production developmental information (new innovations) available with the scientists

(developmental agent), are yet to be fully accessed and harnessed which has led to a wider range of gap between the farmers and the research outcomes as there were fewer extension agents available to disseminate this information to the farmer at the grass root (Adeniyi, 2020; Taiwo, Adebayo, Yekinni and Oyeyemi, 2020 and Udegbumam, 2021). The gap as well might have been a responsible factor for the current production, processing, marketing and the consumption status of cassava and its products for its optimum benefits. However, it is pertinent to know that at this present global information age, cassava growers needs several information of all the technologies on cassava production and the recent scientific findings from researchers for enhanced productivity. To address all these, it is important to establish the information needs of the cassava farmers in Ibarapa area of Oyo state, Nigeria. Hence, the study ascertained the socioeconomic characteristics of the respondents, examined the sources of information, level of awareness on cassava production technologies and the respondents perception on the effect of lack of information. It was hypothesised that no significant relationship existed between the selected socioeconomic

characteristics of the respondents and their information needs.

Methodology

The study was conducted in Ibarapa area of Oyo State with latitudes 70.15'N and 70.55'N and longitudes 30E and 30.30'E. The zone has three Local Governments Areas (LGAs) namely Ibarapa Central LGAs, Ibarapa East LGAs and Ibarapa North LGAs; with seven principal towns (Igbo-ora, Idere, Lanlate, Eruwa, Igangan, Tapa and Aiyete). The natural rainforest vegetation in the zone supports the Agricultural practices especially crop production, the main crop grown include Yam, Cassava, Guinea corn, Melon and Cotton among others (Wikipedia, 2022). A two sampling procedure was employed to select respondents for this study. The first stage involved purposive selection of a chapter in each of the three LGAs where Nigeria Cassava Growers Association (NCGA) were predominant. The selected chapters were Igboora, Eruwa and Aiyete in Ibarapa Central LGAs, Ibarapa East LGAs and Ibarapa North LGAs respectively; with 1000, 800 and 600 members respectively. The second stage involved the simple random selection of 5% of the population of the NCGA members in the chapters; giving

50, 40 and 30 respondents respectively with total number of 120 respondents. Data were collected using interview schedule; and analysed with descriptive (Percentages, weighted mean score and Rank) and inferential (chi-square and PPMC) statistics at $\alpha 0.05$.

Respondents' socioeconomic characteristics like age, sex, religion, educational level, farming experience, farm size and household size were measured on both nominal and interval level as the case dictates. Nine possible sources of information were measured using the scale of never, sometimes and always with the scores of 0, 1 and 2 respectively. The weighted mean score was calculated and was used to rank the sources in descending order. Respondents' levels of awareness of eight possible Cassava Technologies were captured with the response option of 'Aware' and 'Not aware' with the scores of 1 and 0 respectively.

Respondents' perception on the effect of lack of information was captured with the response option of strongly disagreed, disagreed, undecided, agreed and strongly agreed. Some of the perception statements include low income from cassava produce, lack of bank credit and low yield from farm

among others. Ten types of respondents' possible information need such as improved cassava variety, land preparation, weed control, pesticides were measured with the response options of to a large extent, to a lesser extent, to a least extent, and to no extent with the scores of 3, 2, 1 and 0 respectively. The weighted mean score was calculated and was used to rank the sources in descending order.

Result and Discussion

Table one shows that the respondents' were mostly literate (86.7%) and male (65.80%) with mean age, farming experience, farm

size and household size to be 45.36 ± 11.30 years, 23.13 ± 10.20 years, 2.76 ± 1.63 hectares and 5.76 ± 3.12 persons respectively. This shows that the respondents were young, experienced, subsistence farmers with small household size. The younger age of the respondents' couple with their enterprise experience and literacy level may likely position them for greater urge to seek for information that may boost their scale of production as opined by Adeniyi and Yekinni, 2015. However, the scale of their production could be a discouraging factor to their information seeking behavior (Olajide *et al*, 2021)

Table 1: Socioeconomics characteristics of the respondents

| Variables | Frequency | Percentages | Means |
|---------------------------|-----------|-------------|---|
| Age | | | 45.36 ± 11.30 years |
| 0-20 | 01 | 0.83 | |
| 21-40 | 44 | 36.37 | |
| 41-60 | 67 | 55.68 | |
| 61 -70 | 08 | 6.67 | |
| Sex | | | |
| Male | 79 | 65.80 | |
| Female | 41 | 34.20 | |
| Religion | | | |
| Traditional | 06 | 5.00 | |
| Christianity | 53 | 5.25 | |
| Islamic | 61 | 4.25 | |
| Level of education | | | |

| | | | |
|---------------------------|-----|-------|---------------------------|
| No formal education | 16 | 13.30 | |
| Primary education | 23 | 19.20 | |
| Secondary Education | 48 | 40.00 | |
| Tertiary Education | 33 | 27.50 | |
| Farming Experience | | | 23.13±10.20years |
| 1-10 | 11 | 9.16 | |
| 11-20 | 52 | 43.30 | |
| 21-30 | 39 | 32.50 | |
| Farm size | | | 2.76±1.63 hectares |
| 0-5 | 112 | 93.30 | |
| 6 and above | 08 | 6.67 | |
| Household size | | | 5.76±3.12 persons |
| 0-5 | 59 | 49.17 | |
| 6-10 | 55 | 45.80 | |
| 11-15 | 03 | 2.50 | |
| 15 and above | 03 | 2.50 | |

Field survey, 2019

Table 2 shows that the respondents' most available sources of information were fellow farmers (1.61), followed by the farmers' association (1.57) and radio (1.54). This shows that the respondents mostly depend on interpersonal sources of information for their agricultural activities rather than sourcing information from Information Communication and Technologies (ICTs) sources which has been the modern communication conduits. The result of this study is in line with the outcome of Olajide *et al*, (2021) in a similar study. The result further shows that extension agent came as

the 5th information source and the result was in tandem with that of Adeniyi, (2020) which may as well confirms the low ratio of extension to farmer in rural communities as affirmed by Udegbunam, (2021) that Nigeria has the lowest extension workers to farmers' ratio in Africa. Despite the percentage of the respondents who were literate (86.7%; Table 1) it was so surprising that newspaper (1.02) was the least source of respondents' source of information. This might be due to the fact that most of the newspaper were written in English language; whereas Yekinni, Ladigbolu, Adeniyi and Adebisi (2019) has

suggested that developmental information should be packaged using local language to the end users. Furthermore, the least rank of the newspaper among the information sources might probably be that the newspapers were not accessible to the respondents in the rural area. The results of this research uphold the position of

Ternenge, Iorver, Ebute, (2019) in which Newspaper and magazine was rejected as a source of information in a similar study. However, information source is a determinant of agricultural productivity in rural communities since information has been said to be power and resources (Park, 2017).

Table 2: Respondents' Source of Information

| Sources of Information | Never | Sometimes | Always | Weighted mean score | Rank |
|------------------------|-------|-----------|--------|---------------------|-----------------|
| Fellow farmer | 0.8 | 5.0 | 94.16 | 1.61 | 1 st |
| Farmers association | 1.7 | 8.3 | 90.0 | 1.57 | 2 nd |
| Radio | 0 | 14.2 | 85.8 | 1.54 | 3 rd |
| Friends and family | 0 | 18.3 | 81.3 | 1.51 | 4 th |
| Extension agent | 1.7 | 20.8 | 77.5 | 1.47 | 5 th |
| NGO'S | 1.7 | 38.3 | 60.0 | 1.32 | 6 th |
| Religion center | 6.7 | 47.5 | 45.8 | 1.16 | 7 th |
| Television | 10.0 | 54.2 | 35.8 | 1.04 | 8 th |
| Newspaper | 14.2 | 49.2 | 36.7 | 1.02 | 9 th |

Source: Field survey, 2019

Table 3 shows that respondents were mostly aware of all the cassava technologies at their disposal with recommended planting time (100%) being the most aware by all. This implies that the respondents were aware of the technologies that could bring about bumper harvest in Cassava production (Bhagirath, 2020). However, respondents'

awareness for land preparation (98.3%) and pesticides (98.3%) was same meaning that they were mindful of the two practices at the same way and same level. This could be said to be so germane to farmers' level of productivity as tillage practices used is directly proportional to the tuber formation of cassava while the ability to control

cassava pest will boost the productivity of the respondents (Yaroson, Henry, Adeniyi,

Ibrahim and Adam (2019).

Table 3: Percentage Distribution of Respondents by Level of Awareness of the Cassava Technologies

| Cassava Production Technologies | Aware % | Not Aware % |
|--|----------------|--------------------|
| Recommended planting time | 100 | 0.0 |
| Land preparation | 98.3 | 1.7 |
| Pesticides | 98.3 | 1.7 |
| Improved cassava variety | 97.5 | 2.5 |
| Recommended harvesting time | 96.7 | 3.5 |
| Planting method | 93.3 | 6.7 |
| Fertilizer Application | 93.3 | 6.7 |
| Herbicides | 92.5 | 7.5 |

Source: Field survey, 2019

Table 4 shows that the most pressing information need of the respondents on cassava cultivation was land preparation methods (2.46). This was closely followed by information on how to get rid of the weed in the farm. The land preparation information was expected especially the aspect of soil tillage practices which is so germane in cassava production and hence, should be made available and be accessible by farmers at the beginning of cropping season. However, the 1st and the 2nd information need are inter related, the type of the tillage practices embarked upon do determines the rate of weed growth on the farm land; while information on weed

control techniques is needful because weeds are known to harbor insect causing organisms and as well compete with space, soil nutrients, water, and sunlight with crop grown (Bhagirath, 2020). It is worth noting that the respondents had high awareness for pesticides availability (98.3%; Table 3), which was the least information needed by the respondents in cultivating their crop. However, the chemical way of weed control is no longer economical especially at the subsistence level, hence the need for information on how best to carry out the operations for bumper harvest with minimal cost. This implies that the respondents' cultural practices do encourage the

minimum pest control measure needed by the respondents.

Table 4: Specific Information Needs in Cassava Production

| Information need | Not at all | To a low extent | To a lesser extent | To a large extent | Weighted mean score | Rank |
|-----------------------------|-------------------|------------------------|---------------------------|--------------------------|----------------------------|-----------------|
| Land preparation method | 1.7 | 0.0 | 29.3 | 69.0 | 2.46 | 1 st |
| Weed control | 0.8 | 0.8 | 9.2 | 89.2 | 2.39 | 2 nd |
| Recommended planting method | 0.0 | 1.7 | 15.8 | 82.5 | 2.34 | 3 rd |
| Planting method | 0.8 | 0.8 | 20.8 | 77.5 | 2.29 | 4 th |
| Recommended crop spacing | 1.7 | 05 | 17.5 | 75.8 | 2.23 | 5 th |
| Fertilizer application | 3.3 | 1.7 | 15.8 | 79.2 | 2.23 | 5 th |
| Improved variety | 1.7 | 0.0 | 28.3 | 70.0 | 2.22 | 7 th |
| Recommended harvesting time | 0.8 | 1.7 | 2.0 | 77.5 | 1.99 | 8 th |
| Pest control | 0.0 | 0.8 | 78.4 | 20.8 | 1.83 | 9 th |

Source: Field survey, 2019

Table 5 shows that the respondents strongly agreed that when cassava information is inadequate there will be poor marketing of cassava produce (80.0%), lack of bank credit savings (77.5%), low income from cassava produce (76.7%), and low yield from farm (76.7%). This is expected because marketing information is germane for cassava production since it is the stage at which the

effort put into production shall be economically rewarded especially the one facilitated by Information Communication and Technologies as documented by Adeniyi and Yekinni, (2015). However, the poor marketing information could resulted into inability to have savings in the bank as a result of low income and low yield.

Table 5: Perceived Effect of Lack of Information

| Effect of lack of information | Strongly disagreed | Disagreed | Undecided | Agreed | Strongly agreed |
|--------------------------------------|--------------------|-----------|-----------|--------|-----------------|
| Poor marketing of cassava produce | 0.0 | 0.8 | 0.8 | 18.3 | 80.0 |
| Lack of bank credit savings | 4.2 | 0.8 | 1.7 | 15.8 | 77.5 |
| Low income from cassava produce | 1.7 | 3.3 | 0.8 | 17.5 | 76.7 |
| Low yield from farm | 1.7 | 3.3 | 0.8 | 17.5 | 76.7 |
| Continuous use of local technologies | 0.8 | 2.5 | 1.7 | 25.0 | 70.0 |
| Non awareness of processing method | 0.8 | 1.7 | 2.5 | 34.2 | 60.8 |

Source: Field survey, 2019.

The result in Table 6 shows that there existed a significant relationship between respondents age ($r=0.19$, $p=0.02$), farm size ($r=0.20$, $p=0.03$), sex ($\chi^2=12.03$ $p=0.001$), religion ($\chi^2=45.15$, $p=0.000$), level of education ($\chi^2=19.26$, $p=0.000$) and information need. This implies that the age, farm size, sex, religion and level of education are directly proportion to the

respondents information need on cassava production and vice versa. However, the respondents farm size will inform the kind of information that would be sought and their level of education could be a determining factor to the format of information and the level at which such information would be sought. (Adeniyi, 2020).

Table 6: PPMC and chi-square correlations between selected socio-economic characteristics and Respondents' information needs.

| Variables | r-value |
|--------------------|---------|
| Age | 0.119* |
| Farm size | 0.205* |
| Farming experience | 0.153 |

| | | |
|--------------------|----------------|-----------|
| Household size | 19.267 | |
| Variables | r-value | Df |
| Sex | 12.0333* | 1 |
| Religion | 45.150* | 3 |
| Level of education | 19.267* | 3 |

Source: Field survey, 2019 * significant at 0.05 level ($p \leq 0.05$)

Conclusion and Recommendation

The study concludes that literacy level, scope of production and age are favourable characteristics needed for seeking information on Cassava land preparation for greater productivity. Also, Interpersonal communication are so popular among the respondents than ICTs sources probably because of their low educational level while the level of Cassava Technologies' awareness is strong enough to boost their production. However, the insufficient

market information can jeopardize production efforts and bring about poor yield and insufficient income for saving. Hence, the study recommends that information needed by farmers should be packaged using local language especially via Radio which is the most accessed ICTs channels for greater coverage of the information. Also, information on soil tillage practices should be made readily available for farmers at the beginning of cropping season by the developmental agencies.

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