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Performance of Agricultural Extension Services at Enhancing Market-Oriented Cocoa Production in Ife-East Local Government Area of Osun State, Nigeria

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Abstract
The extent at which agricultural extension is rendering support towards ensuring market-oriented cocoa production formed the basis for this study. Multi-stage sampling procedure was used to sample 76 cocoa farmers in Ife-East Local Government Area of Osun State. Radio was the mostly used (92.1%) extension communication channel by the extension agents. The most established linkage was found between farmers and agro-dealers (85.5%). The prominent activities performed by the extension agents toward market-oriented cocoa production were: training on production techniques ($\bar{x} = 3.62$), establishing linkage with input supplies ($\bar{x} = 3.56$) and tailored marketing production ($\bar{x} = 3.53$). Meanwhile, provision of sales outlets to sell produce ($\bar{x} = 2.91$) was ranked low by the cocoa farmers. There was high level of trust for cooperative leadership ($\bar{x} = 1.86$) and extension services ($\bar{x} = 1.81$). There was no significant relationship (r = -0.037) between activities performed by the extension agents and level of trust with other actors. Agricultural extension services should work with relevant governments and non-governmental organizations to create alternative marketing channels to sustain the current efforts at achieving market-oriented cocoa production.

Keywords: Agricultural extension services, cocoa production, market-oriented.

Introduction

In the agricultural production activities, smallholder farmers find themselves at a disadvantage position. This is as a result of little information on market condition with effect on commodity prices and profit to farmers (Taku-Forchu, 2019, Piabuo *et al.,* 2020). Consequently, farmers have no basis upon which either to plan a market-oriented production system or to negotiate market prices and conditions. This is because farmers produce and sell rather than produce to sell. Thus, for sustainable agricultural development, there is the need for a paradigm shift from production driven to market driven agriculture. This will involve ascertaining market conditions before engaging in the actual production. Market-driven refers to business orientation that is based on understanding and reacting to the preferences and behaviours of players within a given market structure. Market orientation in agriculture is basically a production decision issue that is influenced both by production conditions and market signals (Berhanu and Moti 2010). It then means that market-driven enterprise would

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give consideration to both the needs of the consumers and the market and then tailors its production accordingly. Such approach will promote product competitiveness and efficient marketing.

It has been observed that cocoa farmers produce speculatively with no market in sight. This has made cocoa production uncompetitive rendering the farmers to become price takers. However, for paradigm shift, the role of agricultural extension services cannot be over-emphasized. This agency is responsible for extending the scientific knowledge, improving skills, practices and changing the attitudes of rural farmers and also increasing their incomes and standard of living by their own efforts, using their own resources of manpower and material with minimum assistance from government. By encouraging local leadership and a spirit of self-help, extension develops civil pride and progressive growth of the community. Since extension services enjoy close interaction with farmers through dissemination of information, the extension agents should be able to bring farmers together and help them on how to produce for market. There is no doubt that farmers would experience increase food production and income if they are trained to produce for market. It is against this backdrop that this study assessed agricultural extension services in assisting cocoa farmers to be market-oriented. The study identified sources of information to cocoa farmers, identified linkages that ensued, examined market-oriented extension activities performed and ascertained level of trust between cocoa farmers and other actors. The study hypothesized a relationship between activities performed by extension agents and level of trust among actors.

Methodology

The study was carried out in Ife-East Local Government Area (LGA) of Osun State. The LGA is located between latitudes 7°28′N and 7°45′N and longitudes 4°30′E and 4°34′E. Multi stage sampling procedure was used to select cocoa farmers. In the first stage, four (4) wards out of the seven (7) wards were purposively selected because the wards are situated where cocoa is prominently grown. In the second stage, eight (8) from thirty (30) communities were randomly selected. In the third stage, seventy-six (76) cocoa farmers were randomly selected as sample size for this study. Interview schedule was used to collect data.

Data were collected on sources of information, linkages between cocoa farmers and other actors, activities carried out by extension personnel and level of trust among actors in cocoa production. Sources of information were measured by asking cocoa farmers to indicate yes [1] or no [0] to: individual method, group method, publication of print media, organisation of field trips, radio programmes, television programmes. Linkages established by the extension agents to cocoa farmers were measured by asking the farmers to indicate yes [1] or no [0] to any relationship between them and:

agro input dealers, financial institutions, agro-processors, tractor hiring and researchers. Activities performed by the extension personnel towards making the farmers market-oriented were measured by asking the cocoa farmers to indicate the extent to which extension agents perform some duties like; guiding on what to produce that will meet market needs, giving training on production techniques like improved varieties, establishing linkages with input suppliers etc. Thus, for each item, a five-point scale of strongly agree=5, agree=4, undecided=3, disagree=2, strongly disagree=1 was used. Level of trust was measured by asking the farmers to indicate their level of confidence in extension services, reliance on input dealers, reliance on agro processors and etc. For each item, a 4-point rating scale of very trusted =3, trusted =2, slightly trusted =1, not trusted =0 was used. Any variable with a mean of 1.5 and above was regarded as high trust, while variable less than 1.5 was regarded as low trust. Pearson Product Moment Correlation was used to test the hypothesis.

Results and Discussion

Sources of Information

Most (92.1%) cocoa farmers got agricultural information through radio programs, 77.6% through group method, 72.4% through farm and home visits, 64.5% through print media, 48.7 through field trips, 39.5% through television programs and 27.6% through websites/blogs (Table 1). Availability of radio for most of the farmers may be the reason for its choice as the main communication strategy by the extension agents. This supports Saleh *et al.,* (2018) that found radio as the major source of information among the rural populace. It is therefore expected that through the available information, the cocoa farmers will be able to make informed decision on what to produce for the market.

Table 1: Sources of information to cocoa farmers

Extension strategies	Percentage (%)
Group method	77.6
Print media	64.5
Field trips	48.7
Websites/blogs	27.6
Radio	92.1
Television	39.5
Farm and home visits	72.4

Source: Field survey, 2017

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Linkages Established by Extension Agents for Farmers

The extension agents were able to link the cocoa farmers to agro input dealers (85%), financial institutions (84.2%), agro-processors (77.6%), researchers (67.1%) and to tractor hiring services company (35.5%). The high linkages with agro input dealers and financial institutions (Table 2) demonstrate the significance of inputs in market-oriented cocoa production. Agro-chemicals and finance are essentials to perform effective farm management practices and to ensure tailored market production. The linking of cocoa farmers with agro input dealers and financial institutions may help to guarantee availability of these essential inputs at critical times of production. This agrees with Tegegne *et al.,*(2010) that institutional support services of extension, research, input supply, rural finance and marketing are key areas of intervention to transform subsistence mode of production to market orientation. Similarly, the linkage with agro-processors provides assured market that may checkmate excesses of middlemen in cocoa marketing.

Table 2: Linkages established by the extension agents

Linkages established	**Percentage (%)**
Agro input dealers	85.5
Financial institutions	84.2
Agro-processors	77.6
Tractor hiring company	35.5
Researchers	67.1

Source: Field survey, 2017.

Activities Performed by Extension Agents towards Market-Oriented Production

Table 3 shows that the extension services were ranked high on: training on production techniques ($\bar{x}$ =3.62), establishing linkage with input suppliers ($\bar{x}$ =3.56), guidance on what to produce that will meet market needs ($\bar{x} = 3.53$), training on post-harvest technologies ($\bar{x} = 3.52$), provision of information on when to sell produce ($\bar{x} = 3.47$), display of business skills ($\bar{x} = 3.45$), assistance in identifying storage facilities ($\bar{x} = 3.43$), joint discussion of issues ($\bar{x} = 3.40$), utilization of new age tools (such as GSM, Facebook, Twitter) in sharing markets information ($\bar{x} = 3.39$), adaptation of methods/types of training to priorities and needs ($\bar{x} = 3.38$), establishing linkage with credit facilities ($\bar{x} = 3.18$). Meanwhile, the extension services performed poorly on: effective training on record keeping ($\bar{x} = 2.97$), provision of alternatives sales channels to sell produce ($\bar{x} = 2.91$), support on where and how to sell excess/surplus produce at

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good price ($\bar{x} = 2.91$), support in minimizing hurried/distress sale of produce to meet urgent needs ($\bar{x} = 2.79$). Lack of alternate sales outfit for cocoa marketing aside agro-processors/local buyers might be responsible for ranking extension agents poorly on these specific marketing activities. Meanwhile, these findings have demonstrated that extension services are capable of performing functions beyond the traditional production activities. This is in contrast with (Chikaire, Oparaojiaku and Chikezie (2017) that found farmers receiving extension advice in all areas of production except packaging and value addition. By producing for the market, it is expected that the farmers will be able to experience premium prices on their produce.

Table 3: Extension services activities towards market-oriented production

Extension services	Mean Score ($\bar{x}$)	SD	Rank
Training on what to produce that will meet market needs	3.53	1.02	3rd
Training on production techniques	3.62	0.67	1st
Provision of alternative channels to sell produce	2.91	0.87	13th
Linkage with input suppliers	3.56	0.79	2nd
Linkage with credit facilities	3.18	0.54	11th
Assistance on where to sell excess/surplus produce at good prices	2.86	0.87	14th
Support to reduce hurried/distress sales of produce	2.79	0.70	15th
Adapting methods/types of training to farmers' needs	3.38	0.69	10th
Jointly discussion of issues with the extension agents	3.40	0.84	8th
Training on record keeping	2.97	0.92	12th
Sharing market information through tools such as GSM, Facebook and Twitter	3.39	0.77	9th
Identification of storage facilities	3.43	0.89	7th
Training on post-harvest technologies	3.52	0.72	4th
Information on right timing to sell produce	3.47	0.91	5th
Training on business skills	3.45	0.93	6th

Source: Field survey, 2017

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Level of Trust between Farmers and Other Actors

The findings reveal high level of trust between the farmers and other players in areas of confidence in cooperative leadership ($\bar{x} = 1.86$), confidence in extension services ($\bar{x} = 1.81$), reliance on input dealers ($\bar{x} = 1.65$), reliance on the integrity of input suppliers ($\bar{x} = 1.60$), reliance on agro processors ($\bar{x} = 1.57$), interaction between co-operators ($\bar{x} = 1.50$), and confidence in accessibility of loan ($\bar{x} = 1.40$) (Table 4).

Table 4: Level of trust between the farmers and other actors

Items	Mean ($\bar{x}$) score	SD
Confidence in cooperative leadership	1.86	0.90
Reliance on the integrity of input suppliers	1.60	0.80
Confidence in extension services	1.81	0.80
Interaction between co-operators	1.50	0.90
Confidence in accessibility of loan	1.40	0.80
Reliance on input dealers	1.65	0.70
Reliance on agro processors	1.57	0.90

Source: Field survey, 2017.

Relationship between Level of Trust between Farmers and Other Actors and Extension Services Activities

The result shows negative and insignificant relationship (-0.037) between level of trust between farmers and other actors and extension services activities. The implication is that the level of trust between the farmers and other players had no significant relationship with the performance of the extension services.

Table 5: Relationship between level of trust and activities performed by extension agents

Variables	R-value
Level of trust between the farmers and performance of extension services	-0.037

*P ≥ 0.05
Source: Field survey, 2017

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Conclusion and Recommendations

The linkages established by the extension services provide a platform for farmers to access inputs efficiently toward market-oriented cocoa production. Although extension services rendered beyond production related activities, the farmers still considered its performance at providing market related activities ineffective. High level of trust in the relationship signifies the potentials therein the relationship to achieve win-win situation to each actor. Agricultural extension services should work with relevant governments and non-governmental organizations to create alternative marketing channels to sustain the current efforts at achieving market-oriented cocoa production.

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