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Effect of Video-Mediated Extension on Stakeholders' Propensity to Participate in Maize-Grain-Poultry-Feed Agribusiness Cluster in Oyo State, Nigeria

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A B S T R A C T
The study examined the effect of video mediated extension (VME) on stakeholders' propensity to participate in maize-grain-poultry-feed (MGPF) agribusiness cluster in Oyo state, Nigeria. We sampled a total of 111 prospective MGPF agribusiness cluster actors were sampled using a multistage sampling procedure. Data were analyzed using descriptive statistics, weighted score, t-test, ANOVA (at α0.05). Most (78.4%) were not aware of agribusiness cluster before the VME. After the intervention however, majority (84%) rated agribusiness cluster as highly beneficial, with enhancement of productivity (192.8) as the most rated. Inadequate finance (182.9) and poor record/inventory (180.2) were regarded as the most severe constraints perceived to potentially affect agribusiness cluster formation and sustainability. Further results post video-mediated intervention reveals that majority of the stakeholders (82.9%) became knowledgeable about agribusiness cluster while 96.4% were rated as disposed to be involved in an MGPF agribusiness cluster. Significant difference existed in the knowledge of agribusiness cluster before (mean = 4.68) and after (mean = 83.39) the VME (t = -57.712). There was no significant difference in the willingness to participate in agribusiness cluster across the different actors (F = 1.457). The study concludes that video-mediated extension was effective as it engendered high propensity and practicality of agribusiness-cluster for the poultry feed value chain among key actors.

1. Introduction

Maize is one of the major crops in Nigeria. Over the years, the Federal Government of Nigeria, in the bid to boost agricultural productivity has intervened with several policies and programs. For instance, maize, as well as other crops, has been largely targeted and sufficiently captured by the Anchor Borrower's Programme (ABP), Agricultural Transformation Agenda (ATA) among many others. However, due to policy instability propelled by high rate of turnover of programmes and personnel, which characterizes the Nigerian situation, not so much success has been achieved towards improving local production sufficiently (Coker et al., 2018; Federal Ministry of Agriculture Nigeria and Rural Development, 2016) For instance, the maize farming in Nigeria yields an average of 1.8 MT/Ha which is one of the lowest among the top 10 maize producers in Africa. It lags behind countries such as Egypt and South Africa where the yields are 7.7MT/Ha and 5.3MT/Ha (Agricdemy, 2020). Similarly, Nigeria's maize yield is very low compared to the average yield in the United States which is 9.3 tons/hectare over the same period (Amudalat, 2015). In the same vein, Premium Times analysis reveals that Nigeria imported 400,000 tons of maize in 2019, as it did in 2018, which is the second-highest volume imported by the country since 2009 (Mojeed, 2020). Similarly, findings of (Adeosun et al., 2019) shows that, as expected, there exists a strong linear relationship (r = -0.466) between local maize production and maize importation, though in opposite direction. This implies that the high level of importation is discouraging local production. Consequently, the combined forces of policy instability and high level of importation discourages farmers from going into production, leaving just few others in the enterprise. In the same vein, facilities and structures that can aid agricultural productivity are hardly provided for (Ufiobor,

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2017). Hence, farmers are prone to wastage, exploitation by middlemen as well as the vagaries of climate and other production and marketing related stressors. Unfortunately, this has resulted, although among other factors, in increased poultry production cost and gross under-performance of the poultry sub-sector in Nigeria (Anosike et al., 2018). It will therefore be most appropriate to explore a workable solution to address the productivity of maize as well as its profitability.

One of the most proven, practical and realistic means through which the problem of maize can be addressed is the agribusiness cluster. An agribusiness cluster is the geographical proximity and concentration of producers and institutions that are engaged in the food and agricultural sector and that interconnect, build value networks, either formally or informally, when addressing common challenges and pursuing common opportunities (Gálvez-Nogales, 2010). It thrives on the principle of profit sharing, mutual trust and sustainable business relationship. Also, agribusiness cluster has helped boost agricultural production and profitability in diverse nations across the globe. For instance, according to 2SCALE (2017), rice production received a boost in Benin while maize cultivation has been enhanced in Ghana through agribusiness cluster. In Nigeria, agribusiness cluster has equally been helpful as it is achieving some measures of success among actors of different value chains of agricultural commodities. For instance, Friesland Campina Wamco, one of Nigeria's dairy giants are, through the agribusiness cluster model, sourcing milk from traditional Fulani pastoralists, while Psaltry, one of Nigeria's foremost agro-processing companies that refines cassava into high-quality food-grade starch for consumer products are equally fostering off-taking of cassava for industries (Defoer et al., 2017). Indisputably, the agribusiness cluster offers immense benefits. However, in spite of available evidences of successes and benefits, the agribusiness cluster arrangement has received globally (Ghosh and Rajan, 2019; Pouw, Bush and Mangnus, 2019; Bizikova *et al.*, 2020; Fanzo *et al.*, 2020; Schoneveld, 2020, 2022; Atosina Akuriba Margaret and Abunga Akudugu, 2021), the model seems not to have received desired level of popularity among agricultural and food systems stakeholders globally (Gálvez-Nogales, 2010) and in Nigeria, no specific government policy has adopted it. This is evident in the solo pursuit being undertaken by individual actors in the value chain of various agricultural commodities. Actors often operate disjointedly, shouldering production, marketing, and other challenges alone, depending on where they operate along the value chain, instead of sharing risks and profits in an inclusive arrangement like the agribusiness cluster offers. This issue is also evident in the poultry sector, where key stakeholders in the MGPF value chain operate independently without collaborating for maximum productivity. Therefore, it is imperative to explore effective ways to communicate the concept of agribusiness cluster to prospective value-chain actors who should be involved in this important chain of the economy.

Currently, practices such as contract farming and participation in programs like the Anchor Borrowers Programme (ABP) are common among farmers worldwide. These practices, which are considered forms of inclusive agribusiness models, come with their associated benefits and challenges, which have been well-documented in existing literature (Barrett et al., 2012; Mounirou & Yebou, 2023; Mwambi et al., 2016; Singh, 2002; Tuyen et al., 2022). While these approaches have desirable levels of net-benefit, they are not totally the same as the agribusiness cluster which runs on an entirely different model which makes it unlikely to achieve the same results as these different approaches. The agribusiness cluster hinges on mutual benefits from business partnership and the benefits project it as a unique and sustainable approach to solving problems. Although, the agribusiness cluster is not without its own peculiar challenges, reservations and fears, which may be the discouraging factors for possible involvement of key stakeholders in any agricultural value-chain (Saroj et al., 2023; Zhang, 2023). Therefore, to be able to ascertain the intentions of key stakeholders as a suitable condition for not just brokerage, but also sustainability, there is the need to keep the farmers as well as other stakeholders adequately informed on how the agribusiness cluster model runs. This will therefore require a resourceful and innovative extension approach. The VME is one of the very handy means of achieving this. This extension approach has been widely adopted and has proven to be helpful in educating and informing farmers of the need to adopt agricultural innovations and there are several success stories that allude to this (Abate et al., 2019; Karubanga et al., 2017; Lawal-Adebowale, 2012).

VME can take various forms, such as documentaries, soap operas, comedies, and more. Essentially, it involves conveying information with the assistance of video content. In certain cases, these videos may showcase success stories from the past, allowing viewers to comprehend the process and feasibility of achieving similar results. This can be exemplified through video documentaries. In the context of the Agribusiness cluster, a notable success story can be found in the experience of Psaltry in Oyo state facilitated by 2SCALE. Psaltry's engagement was primarily centered on the cassava value chain and some of the success stories have been packaged in the form of video documentaries. One of such evidences, with Psaltry also in Oyo state, which although is around cassava value chain, is considered appropriate due to similar geographical and economic variables. The documentary of Psaltry's success story is therefore resourceful to determine how VME can help to convince farmers and other prospective agribusiness cluster partners to consider being part of a prospective MGPF agribusiness cluster which has never been investigated. The need to therefore ascertain the extent to which the VME achieves favourable inclinations towards the agribusiness cluster among prospective collaborative actors necessitate this study. The study therefore seeks to examine the effect of VME on stakeholders' propensity to participate in MGPF Agribusiness Cluster in Oyo State, Nigeria

The following specific objectives were pursued with respect to actors of the MGPF agribusiness clusters, which were to:

1. highlight the socioeconomic characteristics;
2. investigate the perceived benefits of agribusiness cluster formation as occasioned by exposure to the VME;
3. analyse the perceived constraints to an effective agribusiness cluster formation;
4. assess the extent the VME has achieved knowledge change of agribusiness cluster;
5. examine stakeholder's propensity to participate in a MGPF agribusiness cluster in the study area after exposure to the VME.

The following hypotheses were also tested

$H_0$1: There is no significant difference in stakeholder's knowledge of agribusiness cluster before and after the video mediated extension.

$H_0$2: There is no significant difference in the propensity to participate in agribusiness cluster across the different stakeholders.

2. MATERIALS AND METHODS

The study was carried out in Oyo State Nigeria. Oyo Town purposively due to high prominence of poultry and maize farming and actors are scattered across the four local government areas in a manner suitable for agribusiness cluster arrangement. The population of the study consisted of all MGPF stakeholders in the state. The stakeholders were input suppliers, maize farmers, financial institutions, transporters, feed mill processors and extension agents. Each category of respondents was selected using a multi-stage sampling procedure across the selected local government areas. A total of two extension agents supervises the agricultural activities in each of the 4 LGAs, making a total of 8 extension agents in the 4 LGAs. Fifty percent of each of the extension agents was selected thereby totaling four. Thirty-five percent of maize farmers were selected from the total of about 280 maize farmers thereby making a total of 83 farmers. Also, seven major input dealers were selected from the different local government areas. For financial institutions, at the first stage, a complete list of all the banks in the study area was generated to obtain a sampling frame. The financial institutions considered are basically commercial banks. Four out of the seven commercial banks in Oyo town were therefore selected based on their consent to respond to be part of the study. Similarly, six transporters and seven feed millers who are stakeholders were selected, also based on their availability for research. This thereby gave a total of 111 respondents for the study.

The respondents' awareness of Agribusiness clusters was accessed prior to the video-mediated intervention. Subsequently, video-mediated extension, which involves audio-visual communication aids

(messages displayed on laptops and videos shared via telecommunication media), was used to disseminate information about the agribusiness cluster, specifically how it operates, using the 2SCALE-adapted video for the respondents. The video show was conducted in the language that the respondents could most easily relate to, with the 2SCALE video being translated into the local languages spoken by the respondents. Afterwards, perception of Agribusiness cluster as well as propensity to participate in MGPF Agribusiness cluster was accessed. Improvement in knowledge, perception of agribusiness cluster and propensity to involve in agribusiness cluster was used to infer the effectiveness of the VME. The video details the basic principles agribusiness cluster is based on and highlights the potential benefits and constraints particularly as it relates with the Psaltry arrangement. Our theory is that this enables stakeholders to make informed decisions when expressing their intentions. The premise is that when the video's message is clear to the audience, they can learn about agribusiness cluster, understand its perceived benefits and constraints, and make informed decisions regarding their participation or otherwise. Ladigbolu and Olajide (2018), in a study of farmers' proclivity to use *Soap Opera* (a form of VME) for sourcing agricultural information in southwestern Nigeria established that there was a significant positive correlation between perceived benefit of, and propensity to use. Stakeholders' propensity is operationally defined as the willingness or disposition of the stakeholders to involve in an agribusiness cluster after seeing the video that promotes it. This was measured using two progressive indicators:

1. Willingness to involve in agribusiness cluster: Here, respondents were asked to indicate their willingness via the response option of either 'Yes' or 'No' to participate in the agribusiness cluster.
2. Degree of inclination: Respondents were asked to indicate the level to which they were willing to make agribusiness cluster their engagement on a scale of 1-100 where 1 means inclination towards purely sole engagement in agribusiness cluster as an actor, and 100 is the minimum level of willingness. Hence, 1 to 100 represents a continuum of inclination or willingness.

The willingness of the stakeholders was the outcome variable, and it is used to determine the effectiveness of video-mediated extension. A percentage of 50% and above the willingness score depict that the VME is effective while a low percentage (less than 50%) of willingness indicate that VME is not effective. This is supported by the work of Sousa, Nicolay and Home (2019) who reported that mobile-phone videos are effective based on the willingness of the farmer to adopt the innovation promoted by the video. The video used for this research is a documentary of the partnership between 2SCALE, Psaltry, Nigerian Breweries and other partners produced by MOOV-ON productions (https://www.youtube.com/watch?v=Cwq-ns04SRA). Highlights of the agribusiness cluster were promoted through the video. Voice-over and translation to Yoruba were done for the benefit of Yoruba-speaking respondents, as Oyo is a predominantly Yoruba-speaking community. The adapted versions of the video can be accessed via https://bit.ly/ABC-Project-Video for both English and Yoruba.

Primary data was used for this study and was collected using both qualitative and quantitative methods. Quantitative data was obtained using structured questionnaires for literate respondents while interview schedule was used for their non-literate counterparts. Qualitative data was obtained through focus group discussion (FGDs), participant observation, and in-depth interview. The leaders of the stakeholders group i.e. chairman, coordinators were selected for the in-depth interview while a group of men were used for the FGD.

To measure awareness, respondents were requested to indicate if they were aware of the agri-business cluster model before the intervention. They were to indicate either 'yes' or 'no'. Perceived benefit of agribusiness cluster was measured with a list of 14 benefit items that can be derived from agribusiness cluster compiled from existing literature (Bembenek & Kowalska, 2017; Defoer et al., 2017; Gálvaez-Nogales, 2010). Respondents were asked to state the degree to which they considered the benefits to be derived by selecting from the response options of 'not at all', 'to a lesser extent', and 'to a large extent'. The response options were assigned scores of 0, 1, and 2, respectively. Weighted score was used to rank each of the items in order of importance. Similarly, perceived constraint to agribusiness cluster formation and sustainability was measured by providing respondents with a list of 12 constraint items

to which they responded using the response options 'serious constraint', 'mild constraint' and 'not a constraint', with scores of 2, 1, 0 assigned, respectively. Weighted score was also used to rank the items in order of severity.

A list of 5, 5, 12, 5 and 7 items were used to assess the respondents' knowledge of agribusiness cluster along the five dimensions of formation, financing, operation, structure and roles, respectively. They were provided with response options 'true', 'false' and 'I don't know'. The "I don't know" option takes a constant value of 0, while the correct answer, which was either true or false for each item, was assigned a score of 1 while wrong answer – also, either true or false, was assigned a score of 0. A score of knowledge was determined by summing all the response outcomes for all the items. Computed knowledge score was used to categorise the respondents into two levels of knowledge i.e knowledgeable and not knowledgeable. Hypothesis 2 was tested using Analysis of Variance (ANOVA) while Hypothesis 1 was tested using the Paired Sample t-test.

3. RESULTS

3.1. Pre-intervention assessment

3.1.1 Stakeholder's awareness of Agribusiness Cluster before the intervention

From the information in Table 1, it can be deduced that more than three-quarters of the stakeholders were not aware of agribusiness cluster before the intervention. It was on the basis of their low level of awareness that it is presumed that the respondents' knowledge of agribusiness cluster is low. This is because a person can only be knowledgeable on what he/she is aware of. The result further shows that a significant number of the respondents lacked the knowledge of how the agribusiness cluster model operates as well as its features, with a mean of 4.68.

Table 1. Distribution of stakeholders based on their awareness of Agribusiness Cluster before the intervention

Category	Frequency	Percentage	Mean±SD
Not aware	87	78.4	0.22±0.414
Aware	24	21.6	
Total	**111**	**100.0**	

Source: Field survey (2021)

3.2. Post-intervention assessment

3.2.1 Stakeholders' perceived benefits of agribusiness cluster

Based on the weighted score displayed in Table 2, it can be inferred that the stakeholders considered enhancement of productivity (192.8) as a major benefit that can be derived from agribusiness cluster. In the same vein, promotion of economic development (191.9), as well as creating an enabling environment for interaction and cooperation among different stakeholders (191.9) was equally high in rank in the stakeholders' perceived benefits. However, availability of funds (176.6) was ranked the least among the benefits that could be derived from agribusiness cluster. Overall, more than three quarter (75.7%) perceived the benefit of agribusiness cluster to be high (Table 3)

Table 2 Distribution of stakeholders' by perceived benefit of agribusiness cluster

Benefits	Not at all	To a lesser extent	To a larger extent	Weighted score	Ranks

1. Enhances productivity	2.7	1.8	95.5	192.8	1st
2. Promotes economic development	0.0	8.1	91.9	191.9	2nd
3. Creating an enabling environment for interaction and cooperation among different stakeholders	1.8	4.5	93.7	191.9	2nd
4. Value addition	1.8	6.3	91.9	190.1	4th
5. Improvement in living conditions	2.7	4.5	92.8	190.1	4th
6. Have positive influence on other sectors aside agriculture	0.0	11.7	88.3	188.3	6th
7. Access to resources	0.0	13.5	86.5	186.5	7th
8. Agribusiness cluster helps in meeting consumer demands	0.0	13.5	86.5	186.5	7th
9. Catalyst for national development	0.9	12.6	86.5	185.6	9th
10. Increase market competitiveness	2.7	9.9	87.4	184.7	10th
11. Lower transaction costs	2.7	9.9	87.4	184.7	10th
12. Formation of new business	1.8	13.5	84.7	182.9	12th
13. Profitability increases	1.8	15.3	82.9	181.1	13th
14. Availability of funds	4.5	14.4	81.1	176.6	14th

Source: Field survey (2021)

Table 3 Stakeholders' level of perceived benefits of agribusiness cluster

Benefit category	Frequency	Percentage	Mean±SD
Low	27	24.3	26.14±3.65
High	84	75.7	
Total	**111**	**100.0**	

Source: Field survey (2021)

3.2.2 Stakeholders' perceived constraints to agribusiness cluster formation and sustainability

As shown in Table 4, the stakeholders considered inadequate finance (182.9) as a major constraint to agribusiness cluster formation and sustainability. Poor record/inventory (180.2), unfavourable business environment (176.6) and poor conflict management/resolution (165.8) were also perceived to be major hindrances to agribusiness cluster formation and sustainability. The stakeholders however do not consider lack of requisite training (126.1) and weak link with knowledge institution (124.3) as serious constraints as they were ranked low in terms of severity.

Table 4 Stakeholder's perceived constraints to agribusiness cluster formation and sustainability

Constraints	Not at all	To a lesser extent	To a larger extent	Weighted score	Ranks
1. Inadequate finance	2.7	11.7	85.6	182.9	1st
2. Poor record/inventory	1.8	16.2	82.0	180.2	2nd
3. Unfavourable business environment	3.6	16.2	80.2	176.6	3rd
4. Poor conflict management/ resolution	9.0	16.2	74.8	165.8	4th
5. Weak government support	4.5	29.7	65.8	161.3	5th

6. Production costs increases	2.7	33.3	64.0	161.3	5th
7. Lack of trust	2.7	42.3	55.0	152.3	7th
8. Poor organizational structure	3.6	41.4	55.0	151.4	8th
9. Monitoring/supervision	2.7	44.1	53.2	150.5	9th
10. Depletion of natural resources	8.1	56.8	35.1	127.0	10th
11. Lack of requisite training	3.6	66.7	29.7	126.1	11th
12. Weak links with knowledge institutions	4.5	66.7	28.8	124.3	12th

Source: Field survey (2021)

3.2.3 Stakeholder's knowledge of agribusiness cluster after the intervention

Results (Table 5) reveals that majority of the farmers became knowledgeable about agribusiness cluster as a result of the intervention which is video mediated extension.

Table 5 Distribution of stakeholders based on their knowledge of Agribusiness Cluster after the intervention

Category	Frequency	Percentage	Mean±SD
Not knowledgeable	19	17.1	28.35±2.32
Knowledgeable	92	82.9	
Total	**111**	**100.0**	

3.2.4 Stakeholder's willingness to involve in MGPF agribusiness cluster

Table 6 divulges that majority of the stakeholders (96.4%) had a high inclination towards involvement in MGPF agribusiness cluster.

Table 6 Distribution of stakeholders based on their willingness to involve in MGPF agribusiness cluster

Category	Frequency	Percentage
Not willing	4	3.6
Willing	107	96.4
Total	**111**	**100.0**

Source: Field survey (2021)

3.2.5 Stakeholder's extent of willingness to make agribusiness cluster their sole engagement

Table 7 reveals a high level of willingness to make agribusiness cluster their sole engagement. It will be observed that some that are willing to be involved in agribusiness cluster are not willing to make it their sole engagement.

Table 7 Distribution of stakeholders based on their willingness to make agribusiness cluster their sole engagement

Category	Frequency	Percentage	Mean±SD
Not willing	7	6.3	70.76±20.12
Low	2	1.8	
High	102	91.9	
Total	**111**	100.0	

Source: Field survey (2021)

3.3 Test of hypotheses

Hypothesis 1: There is no significant difference in stakeholder's knowledge of agribusiness cluster before and after the video mediated extension.

The paired sample T test result (Table 8) shows that there is a significant difference in respondent's knowledge before (mean= 4.68, SD=11.741) and after (mean= 83.39, SD=6.819) the video mediated extension; t = -57.712.

Table 8: Paired Sample t-test showing respondent's knowledge before and after the intervention

	Mean	SD	T	DF	P-value	Decision
Knowledge before - Knowledge after the intervention	4.68 83.39	11.741 6.819	-57.712	110	.000	Significant

Source: Field survey (2021)

Hypothesis 2: There is no significant difference in the propensity to participate in agribusiness cluster across the different stakeholders.

The results of the Analysis of Variance presented in Table 9 reveal that there was no significant difference in the propensity to participate in agribusiness cluster across the different stakeholders of MGPF agribusiness cluster (F=1.457, P=0.221).

Table 9ANOVA table showing variance in the propensities of stakeholders to participate in MGPF agribusiness cluster

Propensity	Sum of squares	DF	Mean squares	F-value	P-value	Decision
Between Groups	2318.384	4	579.596	1.457	0.221	Not significant
Within Groups	40585.298	102	397.895			
Total	42903.682	106				

Source: Field survey (2021)

4. DISCUSSION

The result of stakeholder's awareness of Agribusiness Cluster model before the intervention shows that more than three-quarters of the stakeholders were not aware of agribusiness cluster before the intervention. This is a clear indication that agribusiness cluster is not widely known by potential actors in the study area. This poor awareness level can be instrumental to the poor output and productivity being experienced in the sector. This is supported by the findings of Alidou *et al.*, (2010) and Gálvaez-Nogales (2010) who stated that agribusiness development partnership within actors is still new and that most traders, processors, input dealers and financial institutions are not yet strongly involved. Similarly, Gálvaez-Nogales (2010) and Salau, Abdulraheem and Mustapha (2019) affirmed that agribusiness cluster has not been given needed priority by policy makers, globally.

Enhancement of productivity was perceived by stakeholders as a major benefit that can be derived from agribusiness cluster. This position is in line with (Gálvaez-Nogales, 2010) who stated that agribusiness cluster usually enable farmers, particularly small scale farmers to engage in higher productivity. This is also corroborated by the In-depth Interview carried out in Afijio local government in which one of the leaders of the maize farmer group expressed high productivity as a possibility if agribusiness cluster is in place.

"If every one of us can team up, there will be high productivity and abundance of food in the country. Through team work, we will be able to produce more. Our collective efforts will definitely bring about great productivity" (Male/IDI/Afijio).

However, availability of funds was ranked the least among the benefits that could be derived from agribusiness cluster. This implies that the stakeholders are doubtful of the potential of agribusiness cluster in making more funds available because most of the funds will most likely be recycled into the business.

Stakeholders considered inadequate finance as a major perceived constraint to agribusiness cluster formation and sustainability. This corroborates the findings of Alidou *et al.*, (2010) who discovered that many cluster practitioners were willing to adopt new technology and be more active in the cluster network, but the widespread adoption was fraught by lack of funds. However, the pessimism of actors is rather informed by the perpetually poor agricultural finance syndrome which has over the years plagued Nigerian agriculture. This argument is further strengthened by Phillip *et al.*, (2009) assertion that poor funding and lack of access to agricultural loans are major issues that confront agricultural productivity in Nigeria. The finding is equally consistent with that of the qualitative study carried out in Afijio local government in which the respondents stated that:

"Money is the most important thing; if there is no money, there is nothing we can do" (Male/IDI/Afijo)

The result of stakeholder's knowledge of agribusiness cluster after the intervention shows that majority of the farmers become more knowledgeable about agribusiness cluster as result of the VME intervention. The video aptly communicates what agribusiness cluster is as well as how it operated in Ado-Awaye community where Psaltry is domiciled. The documentary of the basic principles of Agribusiness cluster in the language that the stakeholders can best relate with makes the communication effective in conveying the idea of the agribusiness cluster model. This is in tandem with the submission of Ayobolu and Adebayo (2018) that video documentaries are effective training tools that engender the understanding of information shared as well as its retention even after several weeks of the knowledge dissemination.

The result on stakeholder's willingness to involve in MGPF agribusiness cluster reveals that majority of the stakeholders (96.4%) had a high inclination towards involvement in MGPF agribusiness cluster. This can be explained largely due to the benefits they perceived could be derived from it. It also testifies to the effectiveness of the video in communicating agribusiness cluster. This corroborates the assertion of Ongachi *et al.*, (2017), that video-mediated learning is a formidable tool for information dissemination and extension practice. Similarly, the results on the extent to which the stakeholders are willing to make agribusiness cluster their sole engagement show a high level of willingness. The finding is consistent with that of the qualitative study carried out in Atiba local government in which the focus group discussants expressed willingness to involve in agribusiness cluster as sole engagement:

"We can be fully involved in agribusiness cluster If we can get the necessary support and if our agreement prior to the engagement is not breached. The government has promised us many things at different times but they have not fulfilled their promises. We cannot afford to be involved in unprofitable ventures. If we can be assured through commitment of the government/agencies, we will be willing to involve in the agribusiness cluster" (Male/FGD/Atiba)

The results of the hypotheses can be attributed to the effectiveness of video-mediated extension, as the agribusiness cluster was communicated to different stakeholders in the language they best understand. Hence, they became knowledgeable about agribusiness cluster. Beside the local language effect, Karubanga *et al.*, (2017) reported in a similar study that videos can lead to improved knowledge and behavioural change. This is attributed to the visual power of videos, allowing farmers to see practices and technologies demonstrated and relate them to their own context. Earlier studies also support this assertion (Bede et al., 2020; Bentley & Mele, 2011; Ongachi et al., 2018; Zossou et al., 2010). This improvement in knowledge also became instrumental to their willingness such that the majority of the stakeholders were willing to be involved in agribusiness cluster. This result then implies that farmers must have processed the message and realized the benefits of agribusiness cluster and by implications relates it to themselves, relative to what currently obtains with them. This aligns with Li *et al.* (2020) which identified that perceived benefits and perceived value have an impact on willingness. Moreover,

the hypothesis results show that there was no disparity in the willingness of the stakeholders across-boards. This implies that there is no substantial variance in the willingness of the stakeholders to participate in the MGPF agribusiness cluster. This is very important for the sustainability of the agribusiness cluster. All the stakeholders need to have a mutual understanding of the terms and conditions as well as the requirements for a sustainable agribusiness cluster. This is supported by the assertion of Defoer et al. (2017) that inclusive agribusiness requires stakeholders to collaborate on equal terms, for mutual benefits. Similarly, the t-test result also confirms the assertions that VME leads to increase in knowledge and therefore validates earlier submissions that it is a worthwhile and effective tool for information conveyance (Abate et al., 2019; Ongachi et al., 2017)

5. CONCLUSION AND RECOMMENDATIONS

The study concludes that prospective stakeholders in MGPF agribusiness cluster in Oyo state, Nigeria were not knowledgeable on agribusiness cluster but became knowledgeable about it and were willing to involve in the agribusiness cluster based on the exposure and teaching they had through the video mediated extension. In the same vein, the study equally validates earlier studies which had asserted that the VME is a potent means to communicate to different stakeholders across different strata and statuses. This is evident in the willingness to participate as indicated by the different stakeholders as well as the no significant difference in willingness to participate in the agribusiness cluster. This is further to the fact that the VME was effective. The study was able to identify enhancement of productivity, promotion of economic development as well as creating an enabling policy environment for interaction and cooperation among different stakeholders as perceived benefits of agribusiness cluster. This, among others, further serves as the basis upon which the positive inclination was based. The study however implicates inadequate finance, poor record keeping, unfavourable business environment and poor conflict management/resolution as the most likely constraints to formation and/or sustainability of a MGPF agribusiness cluster.

The study therefore recommends that:

1. There is the need to employ more of video-mediated extension as a viable approach to communication in the agriculture and development related enterprise in a coordinated version. These videos can target the new media such as YouTube, Facebook and other platforms for widespread coverage, which can be leveraged by agricultural extension and development organisations for the purpose of effecting changes
2. It is important that partnership be sought with financial institutions, national and international donor agencies such as commercial banks, Africa Agriculture Development Bank (AADB), International Fertilizer Development Company (IFDC), World Bank and other organisations which mandates are towards aiding agricultural development.
3. Government should create an enabling policy environment and institutions which drive an inclusive agri-business model like the agribusiness cluster. Partnership should also be brokered with micro-finance institutions as well as other private agencies in order to broker agribusiness platforms and facilitate the creation of an appropriate framework for its operation and sustainability.

CONFLICT OF INTEREST

The authors declared no conflicts of interest with respect to research, authorship and publication of this article.

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