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Willingness of Public Extension Personnel to Disseminate Organic Farming Practices to Farmers in Ekiti State, Nigeria

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Abstract:- Faith-based extension outreach has been in the fore front of organic farming activities in Ekiti State.Therefore, this study was carried out to assess the willingness of public extension personnel towardsdissemination ofOrganic Farming Practices OFP to farmers in Ekiti State. A multi-stage random sampling procedure was used to select forty-two (42) respondents from whom data were collected usinga well-structured questionnaire. Data collected were subjected to descriptive and inferential analyses. Findings from the study showed that respondents were within their active age range, with the mean age of 41.08±10.46 years.they were mostly male (78.6%), Christian (88.1%),married (73.8%) and members of a professional body (57.1%). The mean work experience was 12.24±10.87years. Lack of incentives($\bar{x}$=2.64), shortage of extension personnel ($\bar{x}$=2.48) and inadequate funding($\bar{x}$=2.48)ranked highest among the constraints perceived by the public extension personnel to militate against dissemination of OFP to farmers. Slightly above half (52.4%) of the respondents were willing to disseminate OFP to farmers.Perceived constraints contributed significantly to the willingness to disseminate OFP (β=0.418, p=0.024). Perceived constraints were the determinants of willingness of public extension personnel to disseminate organic farming practices to farmers in the study area. The study concludes that public extension personnel were willing to disseminate organic farming practices to farmers in the study area, but limited by some identified constraints. Therefore, there is need for Government to address all identified constraintsin disseminating organic farming practicesto farmers.

Keywords:- *Organic Farming Practices,Public Extension Personnel, Willingness.*

I. INTRODUCTION

It has become obvious that Agriculture is still taking part in a momentous responsibility in the overall socio-economic fabric of the country, as it accounts for 17.9% of the GDP in 2015 and about 50% of the workforce (Mahapatra*et al.,* 2016).Agriculture must meet the challenges of feeding the growing population while simultaneously minimizing its environmental ill impacts. Energy intensive conventional agricultureboosts the productivity but however jeopardizes the natural resources vis-à-vis overall ecological balances. Hence, there is a need tofocus on a more environment friendly and sustainable approach to increaseagriculturalproduction.Organic farming is one of the several approaches found to meet the objectives of sustainable agriculture (Mustapha, Bzugu and Sanusi, 2012). Organic agriculture has been described by the International Federation of Organic Movement IFOAM, (2004), as a holistic agricultural system that combines traditional innovation and science to benefit the shared environment and promote fair relationship and good quality of life for all involved. In the same vein, Okapara(2011) and Bello (2008) defined organic farming as agricultural production system that excludes the use of synthetic chemicals fertilizers, pesticides, antibiotics, growth regulators, and livestock feed additives. It is based on minimal use of off-farm inputs, and management practices that restore, maintain and enhance ecological harmony. Kughur (2012) states that although agro-chemicals have significantly increased crop yield, however, in the long-run

these processes can lead to serious depletion of soils because the natural processes of soils converting organic matter and the balance of micro-organisms in the soils have been disrupted. The relevance and need for an eco-friendly alternative farming system arose from the ill effects of the chemical farming practices adopted worldwide. Organic farming is one of the several approaches found to meet the objectives of sustainable agriculture, and different organizations have played important roles in promoting organic farming in Nigeria (Mustapha *et al.*, 2012).

Age *et al.* (2010) reported an increase in organic farming due to the efforts of the Nigerian Organic Agriculture Network (NOAN) which is currently known as the Association of Organic Agriculture Practitioners of Nigeria. Despite the efforts of Association of Organic Agriculture Practitioners of Nigeria in promoting Organic agriculture across the country, it is however, noted that the Justice Development and Peace Commission (JDPC) of the Ekiti State Catholic Diocese, which is faith-based, has been the major organization promoting organic farming in Ekiti State. There is dearth of information on the activities and involvement of public extension personnel (extension personnel of Ekiti State Agricultural Development Programme (EKSADP), in organic farming in the State. The effectiveness of extension service delivery is critically dependent on the willingness of public extension officers to the various agricultural innovations made available to farmers among other factors. Therefore, this study assessed the willingness of public extension personnel towardsdissemination of Organic Farming Practices to farmers in Ekiti State, with a view to promoting organic farming in the study area.

II. METHODOLOGY

This study was carried out in Ekiti-state, Nigeria.A multi-stage random sampling procedure was used for the sample selection. The first stage involved a random selection of two (2) zones (zone 1 and zone 2) from three zones in the State. At the stage two, 50% of public extension personnel in eachof the selected zones (17 out of 33 in zone 1, and 25 out of 50 in zone 2) were randomly selected to make a total of 42 respondents which constituted the sample size for the study. A well-structured questionnaire was used to elicit data on personal characteristics of the respondents, perceived constraints and their willingness to disseminate organic farming practices to farmers in the study area.

The dependent variable which was the willingness to disseminate organic farming practices to farmers was measured on a 5-point Likert scale of Strongly Agree (SA), Agree (A), Undecided (U), Disagree (D) and Strongly Disagree (SD), which attracted the scores of 5,4,3,2 and 1, respectively, for positively worded statement while the negatively wordedstatement attracted the scores of 1,2,3,4 and 5, respectively. The mean score was obtained and used to categorize the respondents on their level of willingness. The respondents with mean score and above were categorized as those that were willing to disseminate organic farming practices to farmers while those with scores below the mean score were categorized as those that were not willing to disseminate organic farming practices to farmers.

Data obtained were analysed using descriptive statistical tools such as frequency counts, percentage, mean and standard deviation. Regression model was also used to determine the contributions of various independent variables to the willingness to disseminate organic farming practices to farmers.

Regression model

$Y = a + b1X1 + b2X2 + b3X3 + b4X4 + b5X5 + b6X6 + e_i$

Where:

Y = Willingness to disseminate organic farming practices to farmers

and

X_1 = Age (years)

X_2 = Sex (Male = 1, Otherwise = 0)

X_3 = Religion (Islam = 1, Otherwise = 0)

X_4 = Marital status (Married = 1, Otherwise = 0)

X_5 = Membership of a professional body (Member = 1, Otherwise = 0)

X_6 = Perceived Constraints (scores)

e_i = Error term

a = Constant term

b_{1-6} = Regression Coefficients

III. RESULTS AND DISCUSSION

➢ *Personal characteristics*

The results of analysis of personal characteristics of the respondents are presented in(Table 1).According to the table, a higher proportion (52.4%) of the respondents were within age range 21 - 40 years, while the mean age was41.35±10.46.The mean age corroborates the findings of Salau and Saingbe (2008) which reported 41.06 years as the mean age of extension workers in their study. The mean age of the respondents implies that they were in their active age range and could effectively discharge their duties.The table further reveals that majority (78.6%) of the respondents were males, which means that malesweremore involved in extension services than females. This corroborates the findings of Adeola and Ayoade (2011) which stated that male dominated Agricultural Development Programme (ADP) service.The table also shows that73.8% of the respondents were married. This implies that the respondents could get encouragement and supportfrom their spouses in carrying out their duties. In addition, it may also afford them opportunities to offer a robust advisory service to the farmers, drawing from their wealth of marital experiences. This corroborate the assertion of Kolawole et al., (2016) that their respondents were better equipped, experience wise in family affairs and will be in the best position to fulfill the obligation of not just disseminating improved agricultural practice to the farmers but also offering robust and all-encompassing advisory service to the farm households.

Findings from religion of the respondents revealed that majority (88.1%) were Christian. This implies the likelihood of Christian dominating the study area, which could be a pointer to the activities of the faith-based extension outreach in organic farming. According to the table, more than half (57.1%) of the respondents belonged to a professional body and by implication, they could be afforded opportunity to access innovations on many improved agricultural practices including organic farming. Finally on the table, the mean length of servicewas 12.24±10.87, which implies that the respondents have spent enough years on their job and that could afford them opportunity to objectively express their feelings about different innovations and improved agricultural practices as well as to understand the challenges that could be encountered in dissemination of such improved agricultural practices to farmers.

Table 1: Distribution of respondents based on their personal characteristics

Personal characteristics	Frequency	Percentage	Mean
Age (years)			
≤ 20	-	-	
21- 40	22	52.4	
41 – 60	19	45.2	41.05±10.46
Above 60	1	2.4	
Sex			
Male	33	78.6	
Female	9	21.4	
Religion			
Islam	5	11.9	
Christianity	37	88.1	
Marital status			
Single	10	23.8	
Married	31	73.8	
Divorced	1	2.4	
Membership of a professional body			
Member	24	57.1	
Non-member	18	42.9	
Length of service(years)			
≤ 10	21	50.0	
11-20	11	26.2	12.24±10.87
21-30	8	19.0	
>30	2	4.8	

Source: Field survey, 2018

➢ *Perceived constraints associated with dissemination of organic farming practices by Public Extension Personnel*

Table 2 presents the results of the analysis of the Perceived constraints associated with dissemination of organic farming practices by Public Extension Personnel to the farmers in the study area. According to the table, it was unveiled that lack of incentives ($\bar{x}$=2.64) ranked highest among the constraints perceived by the public extension personnel to militate against dissemination of organic farming practices. This was followed by shortage of extension personnel ($\bar{x}$=2.48) inadequate funding ($\bar{x}$=2.48), focus of Government on conventional farming ($\bar{x}$=2.05), inadequate access to organic input ($\bar{x}$=1.95), Lack/Inadequate training of extension personnel on organic farming ($\bar{x}$=1.67), and inadequate awareness of the importance of organic farming ($\bar{x}$=1.60). Inadequate contact with subject matter specialists on organic farming ($\bar{x}$=1.50)

ranked next while technical-know-how of organic manure application by extension workers in case of demonstration ($\bar{x}$=1.40) ranked lowest among the identified constraints. This corroborates the findings of Mustapha *et al*. (2012) which opine that the problems of extension of organic farming were enormous, some of which included lack of financial support, poor organic extension activities and lack of awareness among others.

The overall implication of the constraints is that dissemination of organic farming practices to farmers by public extension personnel may be difficult or ineffective, considering the severity of the identified constraints perceived to be associated with the dissemination of organic farming practices to farmers in the study area.

Table 2: Distribution of respondents based on their perceived constraints towards the dissemination of organic farming practices/innovations to farmers

S/N	**Perceived constraints to organic farming innovation dissemination by public extension workers**	**Mean**	**SD**	**Rank**
1	Lack of incentives/rewards/motivation from appropriate authority	2.64	0.62	1st
2	Shortage of extension workers	2.48	0.74	2nd
3	Inadequate funding	2.48	0.71	3rd
4	Focus of government on conventional farming which is believed to improve agricultural production	2.05	0.62	4th
5	Inaccessibility to organic input (seeds, seedlings, organic fertilizer)	1.95	0.76	5th
6	Lack/Inadequate training of extension workers on organic farming	1.67	0.69	6th
7	Inadequate awareness of the importance of organic farming	1.60	0.66	7th
8	Inadequate contact with subject matter specialists on organic farming	1.50	0.67	8th
9	Technical-know-how of organic manure application by extension workers in case of demonstration	1.40	0.63	9th

Source: Field Survey, 2018

Willingness of extension personnel to disseminate organic farming practicesto farmers

The result of analysis as presented in Table 3 revealed that the respondents believed that they could disseminate innovation on organic farming if it would improve the production of farmers ($\bar{x}$=4.88). This ranked first among the willingness statements. Followed by the statement that dissemination of organic farming innovation will be easier if extension workers are properly motivated ($\bar{x}$=4.78).The statement that I am willing to encourage farmers to practice organic farming because of its numerous benefits was the next with the mean ($\bar{x}$=4.49).This implies that the respondents were willing to encourage farmers to practice organic farming. The next important statement was that, the conscious awareness of the populace concerning the detrimental effects of agro chemicals on human health and environment should make the dissemination of organic farming innovation a priority ($\bar{x}$=4.22). Other statement include these following in a descending order:I am inclined to disseminate organic farming innovation if there is enabling environment ($\bar{x}$=4.12), organic farming do not worth publicising ($\bar{x}$=3.84),I am not willing to disseminate any innovation that is not on conventional Agriculture($\bar{x}$=3.36), The present situation in terms of food security is not just right for the dissemination of organic farming innovation($\bar{x}$=2.66), Organic farming is not bad but it's dissemination may not be our priority($\bar{x}$=2.63) and I prefer to disseminate innovation on conventional farming because of the need to meet food requirement of our teeming population ($\bar{x}$=1.85). The implication of the above findings is that the respondents, to certain extents were willing to disseminate organic farming innovation in the study area.

Mean categorization of the willingness of extension personnel to disseminate organic farming practices to farmers, as presented in Table 4, shows that more than half (52.4%) of the respondents were willing to disseminate organic farming practices to farmers while 47.6% of them were not willing. This implies that public extension personnel were positively inclined to disseminate organic farming practices to farmers in the study area probably for health and environmental benefits of such farming practices. However, the considerably high percentage of those that

were not willing to disseminate organic farming practices, albeit not up to half of the respondents, is worthy of note. Their decision could be hinged on the identified constraints perceived to be associated with dissemination of organic farming practices to farmers in the study area.

Table 3: **Distribution of respondents based on their willingness to disseminate Organic farming practices to farmers**

S/N	Statement on perception	Mean	SD
1	I can disseminate innovation on organic farming if it will improve the production of farmers	4.88	0.33
2	Dissemination of organic farming innovation will be easier if extension workers are properly motivated	4.79	0.42
3	I am willing to encourage farmers to practice organic farming because of its numerous benefits	4.50	0.74
4	The conscious awareness of the populace concerning the detrimental effects of agrochemicals on human health and environment should make the dissemination of organic farming innovation a priority	4.24	0.93
5	I am inclined to disseminate organic farming innovation if there is enabling environment	4.14	1.24
6	I am not willing to disseminate any innovation that is not on conventional agriculture	3.43	1.50
7	The present situation in terms of food security is not just right for the dissemination of organic farming innovation	2.69	1.44
8	Organic farming is not bad but its dissemination may not be our priority	2.62	1.08
9	I prefer to disseminate innovation on conventional farming because of the need to meet the food requirement of our teeming population	1.83	0.99
10	Organic farming practices do not worth publicising	3.67	1.63

Source: Field Survey, 2018

Table 4: Distribution of the respondents based on their willingness category n = 42

Willingness Category	Scores range	Frequency	Percentage
Not willing	28.00 – 36.78	20	47.6
Willing	36.79 – 46.00	22	52.4
Minimum score	28		
Maximum score	46		
Mean score±1SD	36.79±4.47		

SD = Standard Deviation

Source: Field survey, 2018

- *Contributions of various independent variables to the willingness of public extension personnel to disseminate organic farming practices to farmers*

Table 5 shows the regression analysis of the contributions of Independent variables such as: age, sex, marital status, membership of professional body, length of service and perceived constraints, to the willingness of public extension personnel to disseminate Organic farming practices to farmers. According to the table, it was unveiled that only perceived constraints (β=0.418,p=0.024) had significant contributions to the willingness of public extension personnel to disseminate Organic farming practices to farmers. Meanwhile, age (β=0.077,p=0.858), Length of service (β=0.162, p=0.691), sex (β=0.210, p=0.235), Religion (β=0.052, p=0.766), marital status (β=0.079, p=0.701) and membership of a professional body (β=-0.130, p=0.468) did not significantly contribute to the willingness of public extension personnel to disseminate Organic farming practices to farmers in the study area. The implication is that willingness of public extension personnel to disseminate Organic farming practices to farmers was mainly determined by the constraints perceived to be associated with the dissemination of organic farming practices.

R Square value of 0.199 shows that 19.9% of the variation in thewillingness of public extension personnel to disseminate Organic farming practices to farmers in the study area was accounted for by the model

Table 5: Regression Analysis of the contributions of independent variables to the willingness of public extension personnel to disseminate Organic farming practices to farmers

Variables	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	19.077	10.763		1.772	0.085
Age	0.033	0.183	0.077	0.180	0.858
Length of service	0.067	0.166	0.162	0.401	0.691
Sex	2.260	1.870	0.210	1.209	0.235
Religion	0.703	2.344	0.052	0.300	0.766
Marital Status	0.749	1.932	0.079	0.388	0.701
Membership of a professional body	-1.158	1.577	-0.130	-0.734	0.468
Perceived Constraints to dissemination of Organic farming practices	0.608	0.257	0.418	2.368	0.024**

R = 0.447, R Square = 0.199, Adjusted R Square = 0.035, Std Error of the Estimate = 4.39145

Source: Field Survey, 2018

IV. CONCLUSION

Based on the findings of the study, it could be established that lack of incentives, shortage of extension personnel, inadequate funding, focus of Government on conventional farming were the major constraints perceived by the public extension personnel to be militating against dissemination of organic farming practices to farmers in the study area. The public extension personnel were willing to disseminate organic farming practices to farmers but perceived constraints were the major determinants of their willingness. Therefore, there is need for Government and others stakeholders in organic farming to address all identified constraints associated with dissemination of organic farming practices to farmers by the public extension personnel while exploring the opportunities that are embeddedin public extension services.

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