International Journal of Scientific Research and Management (IJSRM)
||Volume||13||Issue||12||Pages||708-713||2025||
Website: https://ijsrm.net ISSN (e): 2321-3418
DOI: 10.18535/ijsrm/v13i12.ah01

Utilisation of Disseminated Agricultural Information by Arable Crop Farmers in Oyo State, Nigeria

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Abstract

The study investigated utilization of disseminated agricultural information by arable crop farmers in Oyo State. Structured questionnaire was used to elicit information and two- stage sampling procedure was used to select farmers in the study area. Descriptive statistics were used for the data analysis while chi-square, PPMC and Spearman rho were used to test the hypotheses of the study.

Results show that the mean age of respondents was 54.77±10.835 years and that majority of the respondents (92.3%) were married. The study also revealed that most of the respondents (99.2%) were educated. The mean household size of respondents was 4.98 people and more of the respondents (64.6%) in the study area used trading as an alternative form of income generating activity.. Sources of respondents' agricultural information dissemination include Physical meetings (trainings/workshops) (χ=2.25), the use of electronic media (T.V, Radio, Internet) and Families and Friends (χ=2.22) and print media (χ=2.16) and, (46.9%) of respondents. Benefits derived from agricultural information dissemination by respondents include increased yield, increased income, improved socioeconomic status and improved product quality. Constraints faced by respondents include inadequate capital to purchase farm inputs (χ=1.48), poor infrastructural facilities (χ=1.40), and inadequate follow-up of agricultural information disseminated (χ=1.37).

Furthermore, results revealed that there is no significant relationship between perception (r=-0.056, p=0.527), benefits (r=-0.039, p=0.657), constraints (r=-0.069, p=0.434), and utilization of agricultural information disseminated.

Keywords: Agricultural Information, Utilization, Dissemination, Arable farmers, Media

Introduction

Agriculture is a key component of Nigeria's economy, employing over 70% of the workforce and playing a crucial role in gross domestic product (GDP) contributions, especially through crop production (FAO, 2020). Among different agricultural fields, arable crop farming is essential for ensuring food security, supporting rural livelihoods, and promoting economic sustainability in Nigeria. However, the productivity of arable crop farmers is still low relative to their potential output, primarily due to inadequate access to and ineffective use of timely agricultural information (Olaniyi & Adewale, 2019).

Agricultural information encompasses the data, knowledge and technology that farmers require to enhance their farming practices and make informed decisions. This includes insights on weather, pest and disease control, improved seed varieties, soil management, market trends, supply inputs and government policies. Effective dissemination and utilization of this information are critical for boosting productivity and fostering sustainable agricultural development (Aker, 2019). In the past decade, substantial efforts have been made by the Nigerian government, development agencies, and NGOs to improve agricultural extension services and facilitate better information flow to farmers. Initiatives such as e-extension platforms, mobile advisory services, agricultural radio programs and training workshops have been implemented.

Recent studies have pointed out several challenges that hinder effective agricultural information dissemination among farmers. These barriers include inadequate infrastructure, such as poor road networks and unreliable electricity, which limit farmers' access to extension services and modern information technologies (Ogunniyi & Aiyedun, 2020). The underutilization of available agricultural information is another pressing issue. Even when farmers receive information, socio-cultural, economic, and educational factors influence whether and how this information is applied. According to Uchechi et al. (2023), many farmers still rely heavily on indigenous knowledge and peer advice, which may not always align with current scientific recommendations. Understanding how farmers perceive, access, and apply agricultural information is essential for developing strategies that enhance their productivity and resilience.

The main objective of the study is to investigate how agricultural information is being disseminated and utilised by arable crop farmers in Oyo State, while specific objectives are to:

1. describe the socio-economic characteristics of arable crop farmers who use agricultural information in Oyo state.
2. identify the sources used for agricultural information dissemination to arable crop farmers in Oyo State.
3. determine the perception of farmers to the use of agricultural information.
4. identify the benefits of utilising agricultural information by farmers in Oyo State.
5. investigate the constraints affecting utilisation of agricultural information by farmers in Oyo State.

Methodology

The Study was conducted in Oyo State, Nigeria. Oyo state is divided into four Agricultural Development Zones namely; Ibadan/Ibarapa, Ogbomoso, Oyo and Saki. Oyo State is made up of thirty-three (33) Local Government Areas. The population of the study comprises of arable crop farmers utilising agricultural information in Oyo State, Nigeria. A two-stage sampling procedure was used to select respondents for the study. The first stage involved purposive selection of 3 out of the 4 agricultural zones in Oyo State which are Ibadan/Ibarapa, Oyo and Ogbomoso zones due to predominance of arable crop farmers in those zones. The second stage involved the use of simple random technique to select 30% of registered farmers from the selected agricultural zones which gave a total number of one hundred and eighty (180) respondents for the study. Data was be collected for this study through primary source. The primary data was obtained using quantitative method. Quantitative data was collected with structured questionnaire to elicit information from farmers on the objectives of the study in the study area.

Results And Discussions

Sources of Agricultural Information

Table 4.1 shows that 49.2% of the respondents occasionally get agricultural information through print media and demonstration respectively, 47.7% from trainings/workshops, 46.9% from electronic media and family respectively while 43.1% get from researchers/research institutes.

Table 4.1: Sources of Agricultural Information (n=130)

Sources of agricultural information dissemination	Extent of use					
	Always	Occasionally	Rarely	Never	$\bar{x}$	Rank
Physical meetings (Trainings/workshops)	53(40.8)	62(47.7)	10(7.7)	5(3.8)	2.25	4th
Print media (journals, publications, newspapers)	46(35.4)	64(49.2)	15(11.5)	5(3.8)	2.16	1st
Electronic media (T.V, Radio, Internet)	56(43.1)	61(46.9)	12(9.2)	1(0.8)	2.32	6th
Families and Friends	54(41.5)	61(46.9)	11(8.5)	4(3.1)	2.27	5th
Farm demonstrations	49(37.7)	64(49.2)	14(10.8)	3(2.3)	2.22	3rd
Researchers/Research Institutes	54(43.1)	56(43.1)	14(10.8)	6(4.6)	2.22	2nd

Source: Field survey, 2024

Perception of Farmers on Agricultural Information Utilisation

Table 4.2 revealed that more than half (56.2%) and 59.2% of respondents agree that Utilisation of agricultural information increases agricultural production and helps to increase shelf life of agricultural produce/products respectively, (41.5%) of respondents agree that Utilisation of agricultural information via social media is not usually capital intensive, large proportion (66.95%) and (64.6%) of respondents agree that Utilisation of disseminated agricultural information increased their knowledge on arable crop production and Utilisation of disseminated agricultural information helps to increase man power (labour).

Table 4.2: Perception of farmers on agricultural information utilisation (n=130)

Perception statements for agricultural information dissemination and utilisation	**SA F(%)**	**A F(%)**	**U F(%)**	**D F(%)**	**SD F(%)**	$\bar{x}$	**Rank**
Utilisation of agricultural information has increased my agricultural production	46 (35.4)	73 (56.2)	6 (4.6)	4 (3.1)	1 (0.8)	4.22	12th
Utilisation of agricultural information via social media is not usually capital intensive	29 (22.3)	54 (41.5)	6 (4.6)	38 (29.2)	3 (2.3)	3.52	2nd
Utilisation of disseminated agricultural information has increased my knowledge on arable crop production	32 (24.6)	87 (66.9)	6 (4.6)	4 (3.1)	1 (0.8)	4.12	10th
Utilisation of disseminated agricultural information has not increased sales of my agricultural produce/products	27 (20.8)	42 (32.3)	14 (10.8)	39 (30.0)	8 (6.2)	3.30	1st
Utilisation of disseminated agricultural information has helped increase my manpower (labour)	22 (16.9)	84 (64.6)	14 (10.8)	8 (6.9)	1 (0.8)	3.90	7th
Utilisation of disseminated agricultural information has not increased my access to capital	31 (23.8)	61 (46.9)	9 (6.9)	21 (16.2)	8 (6.2)	3.66	3rd
Utilisation of disseminated agricultural information has helped to increase the shelf life of my agricultural produce/products	37 (28.5)	77 (59.2)	8 (6.2)	7 (5.4)	1 (0.8)	4.09	9th
Agricultural information disseminated through electronic media reach farmers faster than other means of information dissemination	37 (28.5)	67 (51.5)	5 (3.8)	16 (12.3)	5 (3.8)	3.88	5th
Farmers understand agricultural information disseminated through physical meetings better than other media	39 (30.0)	62 (47.7)	9 (6.9)	16 (12.3)	4 (3.1)	3.89	6th
Agricultural information disseminated via social media does not save farmers a lot of time	29 (22.3)	66 (50.8)	9 (6.9)	23 (17.7)	3 (2.3)	3.73	4th
Utilisation of agricultural information enhances collaboration among farmers	33 (25.4)	76 (58.5)	8 (6.2)	10 (7.7)	3 (2.3)	3.97	8th
Proper dissemination of agricultural information creates international market for farmers' produce/products	41 (31.5)	74 (56.9)	6 (4.9)	8 (6.2)	1 (0.8)	4.12	10th

Source: Field survey, 2024

Benefits derived from Utilisation of Agricultural Information

Table 4.3 reveal that 55.4%, 51.5% and 50.8% of the respondents moderately benefited from improved quality product, increased income and yield respectively.

Table 4.3: Benefits Derived from Utilisation of Agricultural Information (n=130)

Benefits derived from agricultural information disseminated	Extent of benefits derived					
	High F(%)	**Moderate F(%)**	**Low F(%)**	**Not a benefit F(%)**	$\bar{x}$	**Rank**
Increased yield	60 (46.2)	66 (50.8)	4 (3.1)	0(0.0)	2.43	1st
Pest and disease management	59 (45.4)	62 (47.7)	9 (6.9)	0(0.0)	2.38	2nd
Increased knowledge on sustainable practices	58 (44.6)	64 (49.2)	8 (6.2)	0(0.0)	2.38	2nd
Increased Income	56 (43.1)	67 (51.5)	6 (4.6)	1(0.8)	2.37	4th
Improved product quality	51 (39.2)	72 (55.4)	7 (5.4)	0(0.0)	2.34	5th
Better soil and environmental condition	58 (44.6)	59 (45.4)	11 (8.5)	2(1.5)	2.33	6th
Improved market for products	54 (41.5)	64 (49.2)	12 (9.2)	0(0.0)	2.32	7th
Improved social and economic status	50 (38.5)	67 (51.5)	12 (9.2)	1(0.8)	2.28	8th

Source: Field survey, 2024

Constraints Associated with the Utilisation of Disseminated Agricultural Information

The major constraints associated with the utilisation of agricultural information are inadequate capital to purchase farm inputs ($\bar{x}$=1.44), poor infrastructural facilities ($\bar{x}$=1.40), High technical expertise/complexity of information disseminated ($\bar{x}$=1.38), and Agricultural information inconsistent with needs ($\bar{x}$=1.38).

Table 4.4: Constraints Associated with the Utilisation of Disseminated Agricultural Information (n=130)

Constraints of utilisation of agricultural information disseminated	Extent of constraint			
	Severe constraint F(%)	**Mild constraint F(%)**	**Not a constraint F(%)**	$\bar{x}$
Inadequate capital to purchase farm inputs	67(51.5)	53(40.8)	10(7.7)	1.44
Poor infrastructural facilities, e.g. lack of electricity, poor network and transportation facilities, etc.	65(50.0)	52(40.0)	13(10.0)	1.40
Inadequate follow-up of agricultural information disseminated	59(45.4)	60(46.2)	11(8.5)	1.37
High technical expertise/complexity of information disseminated	59(45.4)	62(47.7)	9(6.9)	1.38
Religious/cultural barrier to agricultural information disseminated	53(40.8)	58(44.6)	19(6.9)	1.26
Irregular feedback opportunity	52(40.0)	69(53.1)	9(6.9)	1.33
Agricultural information inconsistent with needs	59(45.4)	61(46.9)	10(7.7)	1.38
Presentation of agricultural information in a way that is not practicable	52(40.0)	70(53.8)	8(6.2)	1.34
The ambiguous content of agricultural information disseminated	52(40.0)	67(51.5)	11(8.5)	1.32

Source: Field survey, 2024

Utilisation of Disseminated Agricultural Information by Farmers

Table 4.5 revealed that 51.5% and 50.5% of the respondents always listen to agricultural information on radio and television and improved their crop varieties respectively. However, 53.1%, 52.3% and 45.4% occasionally get regular updates on weed management, regular access to market information as well as better ideas for fertilizer and herbicide application respectively.

Table 4.5: Respondents' Utilisation of Disseminated Agricultural Information by Farmers (n=130)

Statements on Agricultural Information Dissemination and Utilisation	**Frequency of use**					
	Always F(%)	**Occasionally F(%)**	**Rarely F(%)**	**Not at all F(%)**	$\bar{x}$	**Rank**
I listen to agricultural information on radio and television	67 (51.5)	57 (43.8)	6 (4.6)	0(0.0)	2.47	14th
I get regular information on sustainable agricultural practices	61 (46.9)	58 (44.6)	9 (6.9)	2 (1.5)	2.37	9th
I access regular information on early season cropping	53 (40.8)	59 (45.4)	16 (12.3)	2 (1.5)	2.25	1st
I get regular updates on weed management	47 (36.2)	69 (53.1)	13 (10.0)	1 (0.8)	2.25	1st
I access information on pest and disease management	68 (52.3)	48 (36.9)	14 (10.8)	0(0.0)	2.42	13th
I have better access to agricultural market information	52 (40.0)	69 (53.1)	8 (6.2)	1 (0.8)	2.32	6th
I have increased knowledge on adding value to my agricultural produce/products	59 (45.4)	56 (43.1)	14 (10.8)	1 (0.8)	2.33	8th
I have increased access to information on soil conservation practices	60 (46.2)	54 (41.5)	11 (8.5)	5 (3.8)	2.30	4th
I have access to information on mitigating the effects of climate change in production	57 (43.8)	58 (44.6)	13 (10.0)	2 (1.5)	2.31	5th
I get regular updates on improved cropping systems	62 (47.7)	59 (45.4)	8 (6.2)	1 (0.8)	2.40	10th
Agricultural information accessed has improved my crop varieties	66 (50.8)	54 (41.5)	7 (5.4)	3 (2.3)	2.41	12th
There is better access to pre-harvest and post-harvest techniques through the agricultural information disseminated	59 (45.4)	64 (49.2)	7 (5.4)	0(0.0)	2.40	10th
I have better access to source of farm inputs, e.g. seeds, fertiliser, herbicides, etc. from the agricultural information disseminated	57 (43.8)	59 (45.4)	12 (9.2)	2 (1.5)	2.32	7th
I have better idea of fertiliser and herbicide application through the agricultural information disseminated	51 (39.2)	68 (52.3)	8 (6.2)	3 (2.3)	2.28	3rd

Source: Field survey, 2024`

Conclusion And Recommendations

The results obtained in this research revealed that there is no significant relationship between all the tested socio-economic characteristics and the utilisation of agricultural information. There is also no significant relationship between perception (r=-0.056, p=0.527), benefits (r=-0.039, p=0.657), constraints (r=-0.069, p=0.434), and utilisation of agricultural information. It can be concluded that, majority of the respondents had favourable socio-economic characteristics, had high perception of agricultural information, derived benefits from the utilisation of agricultural information, and experienced a high level of constraints with the utilisation of disseminated agricultural information.

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