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Access and Utilization of Agricultural Information among Rural Poultry Farmers in Imo State, Nigeria

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ABSTRACT
The study examined the level of access and utilization of agricultural information among rural household poultry farmers in Imo State, Nigeria. The study described the socio-economic features of respondents and ascertained their level of access and utilization of agricultural information. Multi-stage sampling procedure was used in selecting 144 respondents from the three agricultural zones in Imo State and data collected were analyzed using descriptive statistics. Findings showed that respondents had access to agricultural information on broiler/meat production (68.1%), feed formulation (62.5%), pest and disease control (56.2%), nutritional education (52.8%), production input (52.1%) and market information (44.4%) each. Furthermore, respondents utilized agricultural information accessed on broiler/meat production (65.5%), feed formulation (59.7%), pest and disease control (56.9%), production input (52.8%), nutrition education (45.1%) and market information (42.4). Pooled result showed that the rural poultry farmers had low access to agricultural information (45.1%) and average utilization of agricultural information (50.6%). The study, therefore, recommended that training programmes be conducted based on farmers' identified needs, in a manner that will encourage them to attend, taking into consideration timing, duration, location and language. Extension agents should also intensify efforts to disseminate agricultural information to rural farmers and regularly monitor the poultry farmers to ensure that they utilize such information that would improve their production.
Keywords: Agricultural Information, Access, Utilization, Rural, Poultry Farmer

INTRODUCTION

In Nigeria, poultry is an important subsector of livestock industry ((Ogunlade, Oduwaiye, Omotesho and Komolafe, 2017), its products such as meat and eggs improve nutritional and health status, particularly for vulnerable members of the population like children, pregnant women and weakened persons. Poultry production brings socio-economic changes, generates employment and improves income and quality of life of rural households (Oruche, Atala, Akpoko and Chikaire, 2012).

Poultry production was predominantly rural; the enterprise was mainly in the family backyard characterized by low productivity and primitive technology. However, the sector has undergone tremendous changes over the past decades in terms of genotype, management and technological advancement which has improved the low output to a better performance through the introduction various poultry schemes and programmes (Olaniyi, 2013).

From the foregoing, it is obvious that poultry production possesses all the potentials required to be a sustainable enterprise in a rural set-up if the rural farmers are provided with the necessary agricultural information. Obidike (2011) is of opinion that increasing farmer's access to effective and utilization agricultural information is one of the ways of enhancing the agricultural sector's production and productivity. Hence access and utilization of agricultural information are vital tools for empowering rural farmers to make informed decisions or take actions regarding production and marketing of agricultural commodities.

Considering therefore, the role information plays in enhancing accelerated agricultural productivity, it is important for the rural poultry farmers to be well equipped for them to perform at optimal capacity. Furthermore, the utility of agricultural knowledge lies on the extent to which such knowledge is communicated and utilized by farmers (Ifenkwe, 2010). However, rural poultry farmers in Imo state do not produce enough birds, probably due to lack of access to timely and up-to-date agricultural information which would have enabled them to achieve optimal yield of their farm produce. Furthermore, much attention has not been given in the area of rural poultry farmers' access and utilization of relevant agricultural information.

It is against this background that this research was designed to determine the level of access and utilization of agricultural information among the rural households' poultry farmers in Imo state.

METHODOLOGY

The study was carried out in Imo State, Nigeria. Imo state has twenty-six Local Government Areas and three agricultural zones. The three agricultural zones are: Owerri, Orlu and Okigwe zones. Imo is situated in South-east zone of Nigeria and lies between latitude 5°12′ and 5°56′ North of the Equator and between longitudes 6°38′ and 7°25′ east of the Greenwich meridian. It has two dominant seasons, namely, rainy and dry seasons.

The target population of the study are rural household poultry farmers in the three agricultural zones of Imo State. Multi-stage sampling procedure was used in selecting respondents. The first stage involved a purposive selection of two Local Government Areas from each of the three agricultural zones (Ezinihite-Mbaise and Ikeduru from Owerri zone; Ideato South and Nwangele from Orlu zone, and Ihitte-Uboma and Obowo from Okigwe zone). Two communities were randomly selected from each of the LGA, making it a total of twelve communities. Also, two villages in each of these communities were purposively selected making it a total 24 villages. From this sampling frame, six poultry farming households were selected, making it a total of one hundred and forty-four (144) farming households. Primary data were collected with the use of structured questionnaire.

Data on Personal and socioeconomic characteristics were analysed with simple descriptive statistics such as means, percentages and presented on frequency distribution tables. The level of access to agricultural information was rated in a 3- point rating scale (Always =2, Sometimes=1 and Never=0). Depending on the respondent's access to information, each respondent was evaluated out of 50 scores. Totally, this variable had 26 scores. This was categorized into no access (0), low access (1-10), moderate access (11- 20) and high access (21- 30)

The level of utilization of agricultural information among the respondents was measured on a 3-point Likert-type scale with the options: Utilized Often (2); Utilized sometimes (1); or Not Utilized (0). The maximum score for each respondent was 50, while the minimum was 0. Totally, this

variable had 22 scores. This was categorized into no utilization (0), low utilization (1-10), moderate utilization (11-20) and high utilization (21-30).

RESULTS AND DISCUSSION

Socioeconomic characteristics of respondents

Results in Table 1 shows that out of the 144 rural household poultry farmers, females accounted for 53.5%, while 46.5% were males. The result also showed that the mean age of the respondents was 41.99. The same table revealed that majority (61.1%) of the farmers were married while 28.5% and 10.4% single and widowed respectively.

A high percentage of the farmers had secondary/vocational education (43.7%) followed by tertiary education (35.7%), primary education (11.1%) and no formal education (9.7%). Also, a sizable proportion (68.1%) of household was within the range of 4-6 household size with average mean of 5.27 persons. The same table revealed that majority (66.7%) of the respondents were not members of cooperative societies.

Furthermore, the result on contact with extension agents showed that a large percentage (60.4%) of farmers had no contact with extension agents for the past one year. The observed low contact with the extension agents may be largely attributed to the disproportionate extension agents to farm family ratio.

Fairly large proportions (34%) of the respondents had a stock size of between of 26-50, while a minor fraction (4.9%) owned stock size of between 71 and above. This indicates that majority of the poultry farmers belonged to small-scale category. Moreover, 61.1% of the farmers sell their products, while 38.9% produce their products for family consumption. Majority (62.5%) of respondents earned income below #50,000.00, while 3.4% earn income between the range of ₦150, 000.00 and above. Sale of poultry product is important and additional source of income in rural farm areas. Majority of the respondents' income is below ₦50, 000.00 annually. This funding is not consonant with *a priori* expectation that state the higher the income of individuals, the more likely they would tend to seek for more information, as well as access and utilize it.

Table 1: Distribution of respondents according to socioeconomic characteristics

Variables	Frequency	Percentage (%)	Mean($\bar{x}$)	Std dev.
Sex				
Male	67	46.5		
Female	77	53.5		
Age (years)				
21 – 30	30	20.8		
31 – 40	35	24.3	41.99	11.44
41 – 50	47	32.6		
51 – 60	23	16.0		
Above 60 years	9	6.3		
Marital status				
Single	41	28.5		
Married	88	61.1		
Widowed	15	10.4		
Educational level				
No Formal Education	14	9.7		
Primary School	16	11.1		
Secondary/vocational education	63	43.8	10.69	4.993
Tertiary education	51	35.4		

Table 1: Distribution of respondents according to socioeconomic characteristics (Cont'd)

Variables	Frequency	Percentage (%)	Mean($\bar{x}$)	Std dev.
Household size (persons)				
1 – 3	14	9.7		
4 – 6	99	68.1	5.27	
7 – 9	30	20.8		
Cooperative membership				
Yes	48	33.3		
No	96	66.7		
Extension contacts				
Yes	57	39.6		
No	87	60.4		
Access to credit facilities				
Yes	29	20.1		
No	115	79.9		
Number of birds reared				
Below 10	37	25.7		
11 – 25	36	25.0		
26 – 50	49	34.0		
51 – 75	15	10.4		
Above 75	7	4.9		
Sale of bird				
Yes	88	61.1		
No	56	38.9		
Income earned in one year (₦)				
Below ₦50,000.00	55	62.5		
₦60,000.00- ₦ 100,000.00	25	28.4		
₦110,00.00.00-₦ 150,000.00	5	5.7		
Above ₦150,000.00	3	3.4		

Source: Field survey, 2015

Access to agricultural information

Table 2 revealed that 68.1% and 62.5% of the respondents had access to agricultural information on broiler/meat production and feed formulation, which was significant at a mean value of ($\bar{x}$=1.94 and $\bar{x}$=1.85) respectively. Only 4.2% of farmers had access to agricultural information on chick production at non-significant mean value of $\bar{x}$=1.05. On the basis of their frequency in accessing agricultural information on poultry farming activities, 27.1% and 22.2% of the respondents always had access to information on broiler/meat production and feed formulation, while only 7.6% of the respondents always had access to information on veterinary services. In addition, 47.9% of the farmers sometimes had access to information on pest and disease control, while 20.1% had access to information on sources of safe water.

The result implied that the poultry farmers' access to information on broilers and feed formulation was higher, probably because of the short period of its maturity, when compared with other livestock; however, they mostly sought for information from fellow farmers and private sectors where they purchase their birds as a result of their interest in such information. Also, their frequency of access to agricultural information showed that even when they accessed some information, such access was not regular. The irregular access to such vital information could impact negatively on their poultry farming activities.

Table 2: Distribution of respondents according to frequency of access to agricultural information

Agricultural Information	Rating				Mean ($\bar{x}$)
	Always	Sometimes	Never	Total % of access	
Broiler production	39 (27.1)	59 (41.0)	46(31.9)	68.1	1.94*
Egg production	1 (0.7)	8 (5.6)	135(93.7)	6.3	1.06
Chick production	2 (1.4)	4(2.8)	138(95.8)	4.2	1.05
Pest and diseases	12 (8.3)	69 (47.9)	63(43.8)	56.2	1.65*
Veterinary Service	12 (8.3)	33 (22.9)	99(68.8)	31.2	1.39
Weather condition	-	23 (16.0)	121(84.0)	16.0	1.16
Production inputs	23 (16.0)	52 (36.1)	69(47.9)	52.1	1.68*
Feed formulation	32 (22.2)	58 (40.3)	54(37.5)	62.5	1.85*
Good record keeping	14 (9.7)	17 (11.8)	113(78.5)	21.5	1.31
Sanitation of Stock pen	13 (9.0)	25 (17.4)	106(73.6)	26.4	1.35
Agricultural support services	3 (2.7)	22 (15.3)	119(82.6)	18.0	1.19
Credit facilities	2 (1.4)	17 (11.8)	125(86.8)	13.2	1.15
Market information	11 (7.6)	53 (36.8)	80(55.6)	44.4	1.52*
Nutritional education	13 (9.0)	63 (43.8)	68(47.2)	52.8	1.61*
Safe water	4 (2.8)	29 (20.1)	111(77.1)	22.9	1.25

Source: Field survey, 2015. Total number of respondents: 144, * - significant, Figures in parenthesis are percentages, Decision rule: $\bar{x}$= 2.0.

Respondents level of access to agricultural information

Entries on Figure 1 revealed that the majority (45.1%) of respondents had low access to agricultural information, while 34.0% had no access to agricultural information. The remaining 12.5% and 8.4% had moderate and high access to information respectively. This implied that the respondents generally had limited access to agricultural information and this may have impacted negatively on their poultry production. This, therefore, concurs with Okwu and Umoru (2009), that despite female active involvement in agricultural activities, social and economic constraints placed barriers around access to scientific and technological information such as extension services and other related agricultural information. Irohibe's (2012) showed that women's limited access to agricultural information leads to low productivity in crop, animal production and food insecurity.

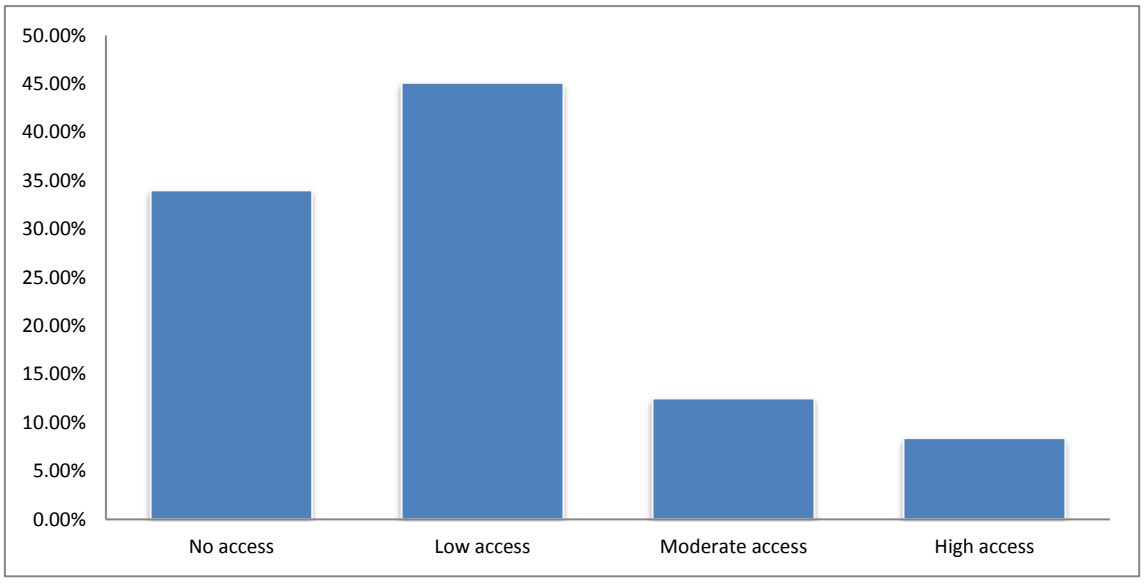


Figure 1: Respondents' level of access to agricultural information

Utilization of agricultural information

Table 3 indicated that the majority (65.3% and 59.7%) of respondents used agricultural information they accessed on broiler production and feed formulation at significant mean 2.11 and 2.00 respectively. However, not all the households' farmers utilized the information accessed as indicated by the decline in number of respondents using such information relative to the number that accessed the information. The frequency of use of information showed an improvement over that of access to information, thereby indicating the farmers' willingness to always apply whatever information they accessed, so as to improve their poultry production in terms of number and size. Also, the high level of education reported among the respondents may have been responsible for the willingness to utilized information accessed on poultry farming activities which they perceived as being more important to them.

Table 3: Distribution of respondents based on their utilization of agricultural information

Agricultural Information	Rating				Mean ($\bar{x}$)
	Always	Sometimes	Never	Total % of used information	
Broiler production	67(46.5)	27(18.8)	50(34.7)	94(65.3%)	2.11*
Egg production	1(0.7)	5(3.5)	138(95.8)	6(4.2%)	1.04
Chick production	2(1.4)	2(1.4)	140(97.2)	4(2.8%)	1.04
Pest and diseases	53(36.8)	29(20.1)	62(43.1)	82(56.9%)	1.94*
Veterinary Service	12(8.3)	32(22.2)	100(69.4%)	44(30.6%)	1.38
Weather condition	10(6.9)	13(9.0)	121(84.1)	23(15.9%)	1.22
Production inputs	53(36.8)	23(16.0)	68(47.2)	76(52.8%)	1.88*
Feed formulation	54(37.5)	32(22.2)	62(40.3)	86(59.7%)	2.00*
Good record keeping	10(6.9)	15(10.4)	119(82.6)	25(17.4%)	1.24
Sanitation of stock pen	28(19.4)	11(7.7)	105(72.9)	39(28.1%)	1.46
Agricultural support services	11(7.7)	7(4.8)	126(87.5)	18(12.5%)	1.20
Credit facilities	1(0.7)	13(9.0)	130(90.3)	14(9.0%)	1.10
Market information	50(34.7)	11(7.7)	83(57.6)	61(42.4%)	1.77*
Nutritional education	12(8.3)	53(36.8)	79(54.9)	65(45.1%)	1.53*
Safe water	29(20.1)	4(2.8)	111(77.1)	33(22.9%)	1.43

Source: Field survey, 2015. Total number of respondents: 144, * - significant, Decision rule: $\bar{x}$=2.0
Figures in parenthesis are percentages,

Respondents level of utilization of agricultural information

Figure 2 revealed that the majority (50.6%) of respondents had low use of agricultural information; while 28.5% did not use the agricultural information source on poultry production. The remaining 12.5% and 8.4% had moderate and high use of information respectively. The overall result showed low utilization of agricultural information by the respondents and this might have resulted to low productivity of their poultry produce. Mama (2010) reported a low use of agricultural information among women dairy farmers which was due to their lack of access to dairy production knowledge and information in rural areas. Irohibe (2012) showed low use of agricultural information by women which could be attributed to their low access to agricultural information, as well as other socio-economic, personal, psychological and institutional factors affecting the women.

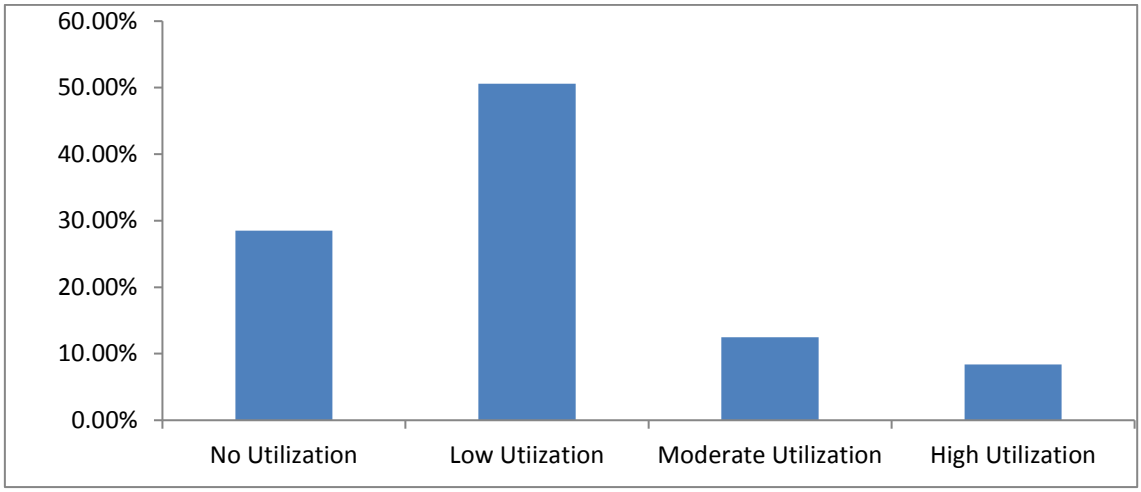


Figure 2: Respondents' level of use of agricultural information

CONCLUSION AND RECOMMENDATIONS

Based on the findings, the conclusion is that the level of access and utilization of agricultural information among the rural poultry farmers in Imo State was low.

The following recommendations are therefore made;

1. Rural poultry farmers should be well sensitized and encouraged to form cooperatives or to join the existing ones. This provides a forum to have access to information such as input; credit facilities etc. and improve their production and standard of living.
2. There is need for extension agents to intensify their efforts to disseminate agricultural information to rural farmers and ensure that they apply the use of such information to improved poultry production.
3. Government, agricultural NGOs and private sectors should liaise with the NYSC, to send Corps members who studied agricultural-related courses to assist in spreading and sensitizing the rural farmers on the knowledge of modern poultry production.

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