Full Length Research Paper

Perceived Effectiveness and Access to Sources of Agricultural Information among Small Ruminant Farmers in Iwo Local Government Area of Osun State

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ABSTRACT: Information and knowledge are very vital in the agricultural development of any community and where they are poorly disseminated as a result of certain constraints the community's agricultural development becomes highly impeded. This study was conducted to investigate the perceived effectiveness and access to sources of agricultural information among small ruminant farmers in Iwo local government area in Osun state. A multistage sampling technique was used for the study. A total of 70 questionnaires were administered for the study. The data collected were subjected to statistical analysis using the frequency table, sample percentage and Chi-square. The finding revealed that 60% of the respondents were female, while 34.4% of the respondent fell between the age ranges of (46-55 years). Also, 60.0% were married, while 32.9% had tertiary education. Also, the findings revealed that the majority (51.4%) of the respondent kept both sheep and goat while 81.4% of the respondent was into production for sale and consumption. However, 87.1% of the respondent used radio while 82.9% used television to source for information. The result also showed that 51.4% and 51.4% of the respondents agreed that agricultural information helped improve their standard of living and also control pest and disease respectively. From the research, 64.3% of the respondents choose the unavailability of funds as a major constraint. Chi-square was used to test for the relationship between socio-economic characteristics of the respondent and the use of agricultural information and it shows that there was no significant relationship among sex (0.087), age (0. 140), marital status (0.117), religion (0.243), and family size (0.566) when compared to the use of agricultural information (p>0.05). There is the need for an increase in the number of extension workers with the view of enhancing the benefits derivable to the potential beneficiaries among farming communities to increase the effectiveness of agricultural information.

Keywords: agricultural information, small ruminant farmers, perceived effectiveness

INTRODUCTION

Over the years, our farmers depend on indigenous or local knowledge for improved animal husbandry. Such knowledge refers to skill and experience gained through oral tradition and practice over many generations. Agricultural information are always meant to get to rural farmers via extension workers, community library, radio, television, film shows, agricultural pamphlets, state and local government agencies e.t.c. Governments of developing countries have a major responsibility of ensuring that there is adequate rural development in their various communities and local governments which would lead to effective and efficient agricultural systems that will

not only supply food and animal protein but also foster the utilization of natural resources in a sustainable manner (CGIAR, 1995). When the rural farmers lack access to knowledge and information that would help them achieve maximum agricultural yield, they are not only grope in the dark but are driven to the urban centres in search of formal employment, as the only option for survival (Munyua, 2000).

There have been short-comings of traditional print and library based methods (Van and Fortier, 2000) of providing agricultural information to small ruminant farmers who are generally illiterate and relatively remote from formal sources of information (e.g. extension stations, libraries). Aina (2007) was of the opinion that farmers would benefit from global information, if information centres cited in rural areas compete with all information and communication gadgets.

In this modern day of information technology, centres provide the rural farmers with prompt and reliable information about what is happening in areas of livestock production which involves the rearing and marketing of livestock (Oladele, 2004) disease and inadequate nutrition in terms of quality and quantity constitute serious constraint to small ruminant production (Tadesse, 2012) good management practices in terms of adequate nutrition disease prevention, control and breeding are essential for improve small ruminant production e.t.c. Small ruminant farmers are faced with constraint of accessing agricultural information however, traditional media such as rural radio, has been used in delivering agricultural messages to rural farmers (Munyua, 2000). Other ways of delivering these messages or information to the rural farmers include print, video, television, films, slides, pictures, drama, dance, folklore, group discussions, meetings, exhibitions and demonstrations (Munyua, 2000). Therefore, this study is designed to investigate the perceived effectiveness and access to sources of agricultural information among small ruminant farmers in Iwo local government of Osun State.

METHODOLOGY

Area of study

The study was carried out in Iwo Local Government Area of Osun state. It covers approximately 245km^2 and it lies on latitude 7° 31 and longitude 4° 91. The total population of the study area is 217,275 people (NPC, 2006). The city primary economic activity is agriculture with the primary crops being Cocoa, Yam, Corn, Cassava, Oil palm and livestock production.

Target population of the study

The target populations of the study are small ruminant

farmers in Iwo local government area of Osun State.

Sampling procedure and sampling size

Multistage sampling technique was used for this research. The first stage involved selection of the study area. Iwo local government was purposively selected because it contains a considerable number of small ruminant farmers. The second stage involved the use of snowball technique to locate small ruminant farmers in the study area. A total of 70 questionnaires were distributed among the respondents.

Data collection and data analysis

Data from this study were collected using primary source through the use of well structured questionnaire and personal interview method. Descriptive technique was used to illustrate the socio-economic characteristics of the respondents; these include frequency distribution and percentage. Analytical tools was used to investigate relationship between two variables and compare significant association between them, chi-square and PPMC (Pearson product moment of correlation) were used to analyze the hypothesis.

RESULTS AND DISCUSSION

From (Table 1a), 60.0% of the respondents were female while 40.0% were male, this shows that female are more actively involved in small ruminant production in the study area. Most of the respondents (34.3%) were within the age range of 46-56 years. This table also showed that 60.0% of the respondents were married while 22.9% and 12.9% were widowed and divorced respectively. 32.9% of the respondents had tertiary education which could be called literate in terms of reading and write, while 20.0% had primary education.

Furthermore (Table 1b) shows that 47.1% of the respondents were Christian and 45.7% are Muslim. Also the result revealed that majority (58.6%) of the farmers had a family size of l-5 and 31.4% were of 6-10 family size. Table 2 shows the enterprise characteristic of small ruminant production in the study area, where the findings revealed that majority (5 1.4%) of the respondent keep both sheep and goat. Also 30.0% keep goat only and 18.6% keep sheep only. The findings contrast that of Ajala *et al.,* (2008) in the Northern Guinea Savannah region of Nigeria, where majority of the respondents kept sheep only rather than goats but in agreement to Aphunu *et al.*, (2011) in Delta Stale of Nigeria where majority of the respondents kept goat. Majority (64.3%) of the respondents practice small scale, while 35.7% practices large scale production. The result also shows that most (81.4%) of the respondents were into production because

Table 1a: The socio-economic characteristics of the respondents in the study area (n-70).

Variable	Frequency	Percentage (%)
Sex		
Male	28	40
Female	42	60
Total	70	100
Age (years)		
26-35	5	7.1
36-45	19	27.1
46-55	24	34.3
56 & above	22	31.4
Total	70	100
Marital status		
Single	3	4.3
Married	42	60
Divorced	9	12.9
Widowed	16	22.9
Total	70	100
Education		
No formal education	16	22.9
Primary education	14	20
Secondary education	17	24.3
Tertiary education	23	32.9
Total	70	100

Field Survey, 2019

Table 1b: The socio economic characteristics of the respondents in the study area (n-70).

Variable	Frequency	Percentage (%)
Religion		
Christianity	33	47.1
Islam	32	45.7
Traditional	5	7.1
Total	70	100
Family size		
0-5	41	58.6
5-10	22	31.4
Above 10	7	10.0
Total	70	100
Income		
Daily	13	18.6
Weekly	23	32.9
Monthly	34	48.5
Total	70	100

Field Survey, 2019

of sale and consumption and the majority (32.9%) of the respondents were into this rearing of small ruminant animal for 16-20 years.

The Table 3 shows the findings base on the sources of agricultural information among small ruminant farmers where the result reveal that 87.1% of the respondent were using radio and 82.9% of respondent were using television to source for information this is in line with (Ajayi, 2003) that the use of radio and television has been found to be a major source of information to farmers in South West of Nigeria. It was also shown that majority of the respondent did not make use of magazine (64.3%) while (35.7%) of the respondent make use of magazine. Result also shows that 61.4% of the respondent did not get their information from newspaper and 38.6% are making use of newspaper in the study area (Adekoya, 2000).

Furthermore, the result reveals that most (85.7%) of the farmers make use of farmers forum in sourcing for information, also 82.9% of respondent make use of

Table 2: Enterprise characteristics of the respondents in the study area.

Variable	Frequency	Percentage
Types of ruminant animal raised		
Goat	21	30
Sheep	13	18.6
Sheep and Goat	36	51.4
Total	70	100
Type of livestock production		
Large scale	25	35.7
Small scale	45	64.3
Total	70	100
Type of management practice		
Intensive	14	20
Extension	22	31.4
Semi intensive	34	48.6
Total	70	100
Type of production		
Sale	10	14.3
Consumption	3	4.3
sales and consumption	57	81.4
Total	70	100
Year of experience		
Below 5 years	7	10
6-10years	8	11.4
11-15 years	22	31.4
16-20years	23	32.9
21 years & above	10	14.3
Total	70	100

Source: Field Survey, 2019

Table 3: Source of agricultural information among small ruminant farmers.

Variable	No	Yes
Radio	9 (12.9)	61 (87.1)
Television	12 (17.1)	58 (82.9)
Films	47 (67.1)	23 (32.9)
Pictures	39 (55.7)	31 (44.3)
Group discussion	2 (2.9)	68 (97.1)
Mobile phone	18 (25.7)	52 (74.3)
Internet	45 (64.3)	25 (35.7)
Posters	44 (62.9)	26 (37.1)
Magazine	45 (64.3)	27 (35.7)
Newspaper	43 (61.4)	27 (38.6)
Farmers group	10 (14.3)	60 (85.7)
Extension agent	12 (17.1)	58 (82.9)
Extension bulletin	44 (62.9)	26 (37.1)
Video	45 (64.3)	25 (35.7)

Source: Field Survey, (2019);
NOTE: Figures in parenthesis are percentages

extension agent which show that the extension workers are close to the farmers in the study area, likewise 74.3% of the respondent make use of their mobile phone in getting information in the study area (Ajayi, 2002). Table 4 revealed the level of the use of agricultural information among small ruminant farmers in the study area, it was revealed that majority of the respondent (54.3%) sometimes have access to radio to source for agricultural information which disagrees with the findings of (Helen and Amin, 2002) that radio was a relevant medium to any strategy that involves rural development. 65.7% use television sometimes and 18.6% always, this in line with

Table 4: Access to sources of agricultural information among respondents in the study area.

Variable	Never	Sometimes	Always
Radio	9 (12.9)	38 (54.3)	23 (32.9)
Television	11 (15.7)	46 (65.7)	13 (18.6)
Films	37 (52.9)	23 (32.9)	10 (14.3)
Pictures	33 (47.1)	31 (44.3)	6 (8.6)
Group discussion	6 (8.6)	13 (18.6)	51 (72.9)
Posters	33 (47.1)	27 (38.6)	10 (14.5)
Magazine	42 (60)	15 (21.4)	13 (18.6)
Newspaper	38 (54.3)	15 (21.4)	17 (24.3)
Farmer group	5 (7.1)	17 (24.3)	48 (68.6)
Extension agent	6 (8.6)	33 (47.1)	31 (44.3)
Mobile phone	16 (22.9)	34 (48.6)	20 (28.6)
Internet	40 (57.1)	18 (25.7)	12 (17.1)
Extension bulletin	36 (51.4)	29 (41.4)	5 (7.1)
Video	41 (58.6)	23 (32.9)	6 (8.6)

Source: Field Survey, (2019); NOTE: Figures in parenthesis are percentages

Table 5: Perceived effectiveness of agricultural information.

Variables	SA	A	U	DA	SD	Mean value
Control of pest and disease	24(34.3)	36(51.4)	7(10.0)	3(4.3)	0(0)	4.16
Use of improved breed of livestock	18(25.7)	30(42.9)	13(18.9)	9(12.9)	0(0)	3.81
Reduce mortality	14(20.0)	31(44.3)	20(28.6)	4(5.7)	1(1.4)	3.76
Increase fertility	16(22.9)	30(42.9)	16(22.9)	8(1.4)	0(0)	3.77
Reduce cost of production	14(20)	31(44.3)	16(22.9)	7(10.0)	2(2.9)	3.69
It will improve my standard of living	19(27.1)	36(51.4)	9(12.9)	4(5.7)	2(2.9)	3.94
It will promote productivity	17(24.3)	31(44.3)	13(18.6)	7(10.0)	2(2.9)	3.77
Vaccination of small ruminant	14(20.0)	32(45.2)	13(18.6)	11(15.7)	0(0)	3.7
It promotes sanitation	13(18.6)	36(51.4)	16(22.9)	5(7.1)	0(0)	3.81
It help to maintain accurate breeding record	17(24.3)	26(37.1)	17(24.3)	10(14.3)	0(0)	3.71
Introduction of new animal vaccines and drugs	11(15.7)	39(55.7)	13(18.6)	4(5.7)	3(4.3)	3.73
Use of artificial insemination on sheep and goat	13(18.6)	29(41.4)	11(15.7)	11(15.7)	6(8.6)	3.46
It encourage the practice Quarantine	11(15.7)	28(40.0)	18(25.7)	10(14.3)	3(4.3)	3.49

SA-Strongly Agree, A-Agree, U-Undecided, DA-Disagree, SD-Strongly Disagree
Source: Field survey, 2019

(Dauda, 2009) which stated that radio is a common use among farmers in Nigeria and have a good accessibility. Furthermore, the result shows that little of the respondent (24.3%) sometimes has access to information through farmers' forum or farmers group. The result also reveal that most (47.1%) the farmers sometimes have access to information through extension agents while 44.3% always have access to them, this shows that most of the farmers have access to extension agents in the study area. Majority of the respondent (57.1%) never make use of internet to source for information while 25.7% use it sometimes. Farmers' educational background is informal which reduces access and involvement of farmers to the use of computers/internets (Lincoln, 2009). Also, majority of the respondent (51.4%) never use of extension bulletin and 7.1% always make use of it. Result from this table is in line with (Chaachharef *et al.,* 2012) that reported that farmers prefer the use of mass media like radio, television, and mouth to mouth to get information than reading books or bulletin.

Table 5 shows the result based on perceived effectiveness of agricultural information in the study area. 51.4% of the respondent agreed that the use of agricultural information is effective in controlling of pest and disease, 42.9% agrees that the information are effective in improvement of breeds of livestock, likewise 44.3% agreed that there is reduce in mortality when there is use of agricultural information in the study area. Also, 44.3% of the respondents agreed that agricultural information promotes productivity, this *is* in line with (Dauda, 2009) that if information pass through good medium to the farmers, it will yield a good result in their production.

The research work also shows that the 14.3% of the respondent disagreed that the use of information helps to maintain accurate breeding record while 5.7% disagreed that it is effective for the introduction of new animal's vaccine and drugs and 41.4% agreed that agricultural information helps in artificial insemination of sheep and goat also the information going help them in practicing of

Table 6: Constraint encountered by the small ruminant farmers.

Constraints	Not a constraint	Minor constraint	Major constraint	Mean value
Inability to read and write (illiterate)	24(34.3)	30(42.9)	16(22.9)	1.89
Lack of good road for community visit of extension workers	3(4.3)	49(70.0)	18(25.7)	2.21
Poor/erratic power supply	0(0)	54(77.1)	16(22.9)	2.23
Delay in information	12(17.1)	31(44.3)	27(38.6)	2.21
Unavailability of fund/economic barrier (funds)	8(11.4)	17(24.3)	45(64.3)	2.53
Social-cultural belief	12(17.1)	51(72.9)	7(10.0)	1.93
Lack of training and knowledge	15(21.4)	28(40.0)	27(38.6)	2.17

Percentage in parenthesis. Source: Field survey, 2019

Table 7: Relationship between socio-economic characteristics of small ruminant and uses of agricultural information.

Variables	X^2-value	P-value	Decision
Sex	6.56	0.09	NS
Age	13.53	0.14	NS
Marital Status	14.15	0.1 2	NS
Education	50.39	0	S
Religion	7.94	0.24	NS
Family size	4.83	0.57	NS
Income Source	15.3	0.02	S

Source: field survey, 2019

Table 8: PPMC analysis showing the relationship between access to source of agricultural information and perceived effectiveness.

Variables	r-Values	P-value	Decision
Source of information and perception	0.059	0.000	S

Source: field survey, 2019

quarantine with mean value of 3.49. This is in line with (Otchere. 2010) which started that high standards of sanitation and management are essential for animal production which leads to increase in profit, better health and reduce mortality among animals.

Table 6 shows the Constraint encountered by the small ruminant farmers in the study area. Majority of the respondents indicated that lack of community visit of extension workers, poor power supply, socio-cultural belief and lack of training and knowledge are minor constraint in the study area. Odewale, (2005) stated that government should take proper strategies in ameliorating problem facing farmers in term of road and power supply due to high loss in agricultural product in Nigeria. 64.3% of the respondents indicated that unavailability of fund/economic barrier is a major constraint, this agrees with the findings of Aphunu *et al.* (2011) who reported that respondents identified inadequate fund as their major constraints that militated against small ruminant production in the study area.

Findings in Table 7 show that there is no significant relationship between socio-economic characteristics and use of agricultural information except education and income source. This finding reveals that farmers' sex, age, marital status, religion and family size do not affect the use of information by the farmers.

Table 8 shows that there is a significant relationship between access to sources of agricultural information by the small ruminant farmers and perceived effectiveness. Where the r-value is 0.059 and p-value is 0.000 which the null hypothesis is rejected and the alternate hypothesis is accepted. This implies that there is correlation between access to source of agricultural information and perceived effectiveness.

Conclusion

The result shows that majority of the respondents 60% are female, while majority of the farmers are monthly earner. it was reveal that 51.4% of the respondent reared both sheep and goat, and majority (81.4%) of respondents are rearing their animals for sale and consumption. The use of extension bulletin and internet is very low in the study area. It can therefore be concluded that radio, television, group discussion and farmers forum

has become a more veritable tool that can be utilized in dissemination information in the study area. The result also shows that availability of fund/economic barrier is a major constraint for the small ruminant farmers.

Recommendations

From the result gotten, the following recommendation can be made:

(i) Farmers should be encouraged to make use of agricultural information available to them in order to improve and increase their production rate and provision of rural infrastructure such as electricity to enhance access to agricultural information for optimum productivity.
(ii) There should be training programs designed in such a way that even the uneducated farmers were actively involved in the training. Thus, training sessions can be conducted in both English and local languages.
(iii) There is the need for the extension managers to increase the number of extension workers in the study area with the view to enhancing the benefits derivable to the potential beneficiaries through research extension-farmers' linkage among farming communities to increase effective use 01 agricultural information.

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