(RESEARCH ARTICLE)

Assessment of information needs of pig farmers in Makurdi local government area of Benue State, Nigeria

Attah Agbo Joseph, Otene Victor Akwu * and Oche Mary Ene

Department of Agricultural Extension and Communication, Federal University of Agriculture, Makurdi

Abstract

This study was carried out to access information needs of pig farmers in Makurdi Local Government Area of Benue State. Pig farmers formed the population of the study. Purposive and simple random sampling techniques were used to select 82 respondents from 5 council wards from the study area. Data were collected using a well-structured questionnaire, and analyzed using both descriptive and inferential statistics. The research findings revealed that majority (52.44 %) of the respondents were married. Most (47.56 %) of the respondents were aged between 21-30 years, had formal education (95.12%) and a family size 5-9 persons (56.10 %). The result of the research also revealed that most of the respondents have been farming for 1-4 years (54.88 %), earn income of below ₦250, 000 (71.95 %) and had a flock size below 20 pigs (60.98 %). The major area of information need is in the control of pests and diseases ($\bar{x}$ = 2.04), feed ($\bar{x}$ = 1.98) and marketing ($\bar{x}$ = 1.84). The socioeconomic characteristics of the respondents that significantly affected their access to information need were education (W= 3.25) and farming experience (W = 4.26). Based on the finding of the research, it was recommended that information on disease and pest control be conveyed to the pig farmers by extension agents, and more extension agents employed to provide information to the farmers.

Keywords: Assessment; Agricultural information; Needs; Pig farmers

1. Introduction

Information is a very important resource for profitable production [1]. Information opens the door to better opportunities with respect to production and marketing of agricultural produce. For information to be effective, it should get to the users of the information in good time, and should also meet the information needs of the receiver [2]. This is considering the fact that the information needs of individuals differ [3].

A good number of people in Makurdi local government area of Benue State are involved in the production of pigs. Pigs are used for almost every important occasion among the Tiv tribe who are the major inhabitants of Makurdi. The level of production of pigs, though relatively high is not up to the optimum. Production can be enhanced in the farmers have access to agricultural information, and if the information is delivered in line with their information needs. It therefore becomes necessary to determine the information needs of the pig farmers in Makurdi local government area of Benue State, Nigeria, as this will facilitate information dissemination and use among the farmers. This study was designed to assess the information needs of the pig farmers in Makurdi. Specific objectives of the study were to:

- Describe the socio-economic characteristic of pig farmers in Makurdi Local Government Area of Benue State;
- Identify the information needs of Pig farmers in the study area; and
- Determine the challenges faced by the pig farmers in meeting their information needs.

The following hypothesis was stated and tested:
The socio-economic characteristics of pig farmers do not have any significant effect on their level of information need.

---

* Corresponding author: Otene Victor Akwu

2. Research methodology

2.1. The study area

The study was carried out in Makurdi local government area of Benue state, the State capital. Its coordinates are 7° 43′ 50″ North and 8° 32′ 10″ East and defined by a 26 km radius with the Benue river and its tributaries covering a substantial area of the town [4]. Makurdi located at the heartland of the tropical guinea savanna zone of central Nigeria has an annual average rainfall of 1090 mm.There are two distinct seasons, the rainy season and the dry season; the former lasts from April to October and the latter from November to March. Makurdi has a temperature range between a minimum of 27.8 °C to 28.2 °C and a maximum of 30.1 °C to 34.1 °C.

The dominant tribes in the study area are Tiv, Idoma, igede and the Etulo. Though a metropolitan part of the State, a reasonable size of the population is involved in agricultural production; pig production inclusive. A map of Makurdi is presented in figure 1.
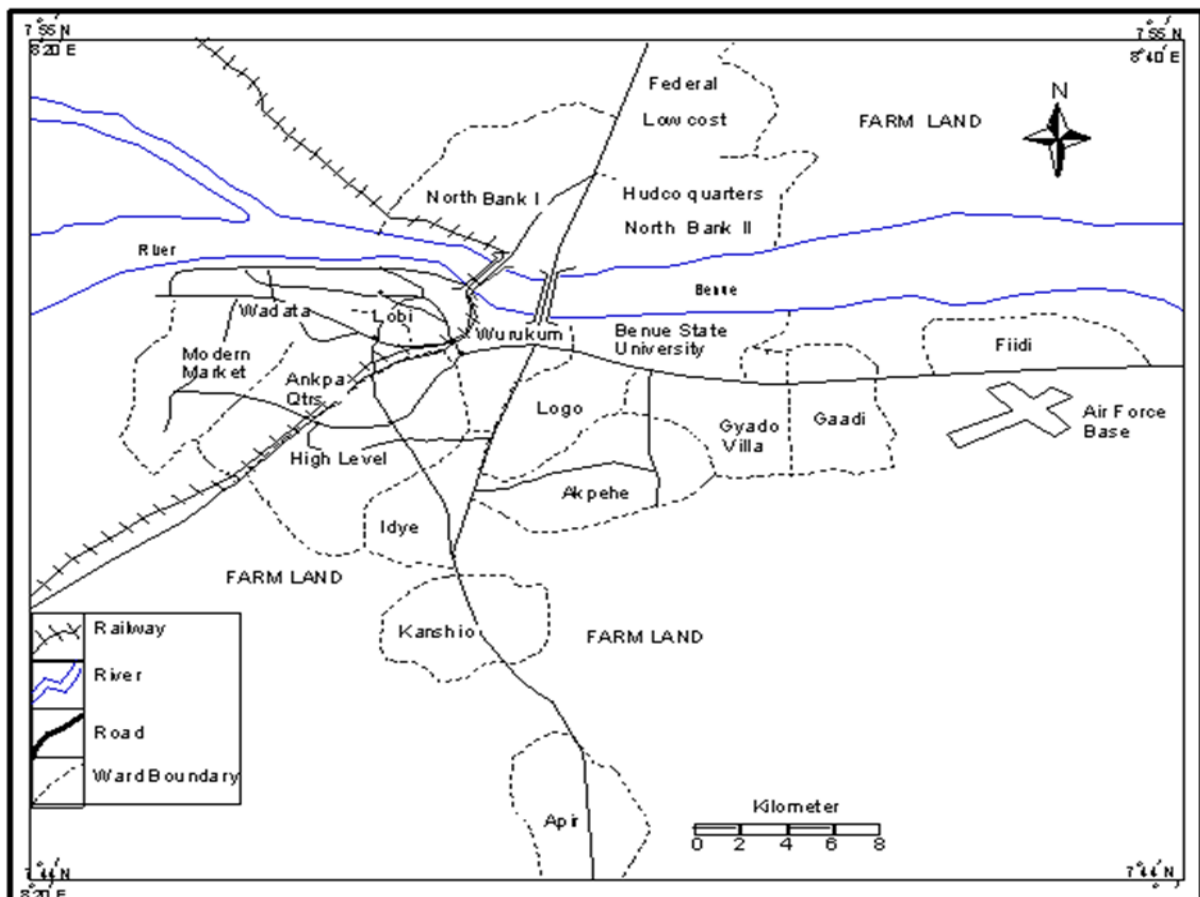

Figure 1 Map of Makurdi local government area of Benue State.

2.2. Population and sampling procedure

The population of the study comprises all the pig farmers in Makurdi local government area of Benue State. Since it was impracticable to study the entire population, a sample was selected for the study. The sample was selected using purposive and simple random sampling techniques. Five council wards were purposively selected among the eleven council wards of the local government. The purpose of selection of the five council wards was the relatively large concentration of pig farmers which can serve as the true representation of all pig farmers in the Local Government hence the study has to do with pig farmers.

The population of pig farmers in the five council wards was obtained from Benue Agricultural and Rural Development Authority (BNARDA). A sample size of 82 respondents was selected, representing 15 % of the sampling frame.

2.3. Methods of data collection and analysis

Primary data were used for this study, and were collected using a structured questionnaire comprising various sections. Section A contained information on the socio-economic and institutional characteristics of pig farmers, while Section B contained the information needs of pig farmers. Section C covered the challenges facing pig farmers in accessing agricultural information. The collected data were analyzed using descriptive and inferential statistics. While the objectives were achieved using descriptive statistics, the hypothesis was tested using logistic regression.

Logistic regression is an analytical tool that can be used to predict the effect of socio-economic characteristics of respondents on their level of information need. The logistic regression is of the form:

$$Y = \frac{e^{a+\beta_1 X_1 + . \quad . \quad . \quad . \quad + \beta_7 X_7}}{1 + e^{a+\beta_1 X_1 + . \quad . \quad . \quad . + \beta_7 X_7}}$$

Where

Y= Probability of level of information needs of pig farmers (1=High, 0=Low)
a = constant term
βi (i=1,2,3.....7) = vector of the parameter to be estimated
X_1 = Marital status (1 = married, 0 = otherwise)
X_2 = Age (Years)
X_3 = Education (1 = possess formal education, 0 = otherwise)
X_4 = Household size (Persons)
X_5 = Farming experience (Years)
X_6 = Income (Naira)
X_7 = Herd/flock size

3. Results and discussion

3.1. Socioeconomic characteristics of respondents

The socioeconomic characteristics of the respondents is presented in Table 1. Research findings revealed that most of the respondents (52.44 %) were married. This indicates that married farmers were predominant in the study area. The couples may be partners in terms of providing money, labour, knowledge and imparting confidence to one another in the production of pigs. Agricultural information may also be obtained from spouses and members of the family. Shata and Purnima [5] also found most farmers in Manipur to be married.

It was found that the highest percentage of the respondent (47.56 %) were within the ages of 21 and 30 years. This indicates that most of the respondents were in active age group and their quest to obtain information and use is high. Meitei and Devi [6] noted that younger farmers would most likely be willing to spend time to obtain information on improved technologies compared to the older farmers.

Most of the respondents (95.12 %) had a formal education and only 4.88 % had no formal education. This implies that majority of the respondents were literates and this would make them more responsive to agricultural programmes that provide information for pig production. Ariyo (2011) noted that educated farmers are assumed to be able to process information and search for appropriate technologies to alleviate their production constraints through their accessibility.

The research findings revealed that majority (56.10 %) of the respondents had a household size ranging between 5 and 9 persons. A large household size would facilitate the flow of information from one person to another. This further implies that the respondents are prone to cheap labour provided by family members.

With respect to farming experience, majority (54.88 %) of the respondents had pig farming experience between 1 and 4 years. This implies that farming experience in the study area is in the hands of the pig farmers with low years of experience. The lack of experience could be detrimental to pig production, and also necessitates the flow of information to the farmers.

It was found that majority of the respondents (71.95 %) earned below ₦250, 000. This indicates that the farmers do not earn much from their farms. Sourcing of information at a cost could therefore be a problem to the farmers. Also, majority (60.98%) of the respondents had a flock size of below 20 pigs. This indicates that majority of the respondents are small

scale farmers with a limited number of flock size. Information will be required by the respondents for efficient and profitable production from their small flock, while efforts at expanding their flock size is considered. Adeyanju and Akinwumi [7] also found pig farmers in Ogun State, Nigeria to have small flock.

Table 1 Socioeconomic characteristics of respondents (n= 82)

Socio-economic characteristics	Frequency	Percentage	Mean ($\overline{\overline{x}}$)
Marital status			
Single	39	47.56	
Married	43	52.44	
Age (Years)			
≤ 20	7	8.54	
21-30	39	47.56	
31-40	23	28.05	
41-50	8	9.76	
51-60	3	3.66	
> 60	2	2.44	32.68
Level of education			
No formal education	4	4.88	
Formal education	78	95.12	
Family size (Persons)			
≤ 4	12	14.63	
5-9	46	56.10	
10-14	19	23.17	
> 14	5	6.10	8.00
Years of farming experience			
1-4	45	54.88	
5-9	22	26.83	
10-14	9	10.98	
15-19	6	7.32	7.01
Income			
≤ 250, 000	59	71.95	
250, 001-500, 000	12	14.63	
500, 000 – 750, 000	4	4.88	
> 750, 000	7	8.54	272,097.6
Flock size			
≤ 20	50	60.98	
21-40	18	21.95	
41-60	7	8.54	
61-80	2	2.44	
> 80	5	6.10	27.81

3.2. Information needs of respondents

The analysis on information needs of pig farmers is presented in Table 2. Research findings revealed that the major areas where the farmers need information were on disease and pest control ($\overline{x}$ = 2.04), feed ($\overline{x}$ = 1.98) and marketing ($\overline{x}$ = 1.84). The result implies that pig farmers needs access to information on pests and diseases which are primarily needed for survival of the pigs and maximum output or productivity. Information on feed is next to pest and disease, as the animals would need to feed, and feed properly to attain optimum growth and productivity. Information on

marketing is also important, as the farmers would need to profitably sell their animals. Provision of these category of information to the farmers will therefore record high acceptability and application.

Table 2 Information needs of respondents (n = 82)

Information needs	Low		Medium		High		Mean
	Freq.	%	Freq.	%	Freq.	%	
Marketing	27	32.93	41	50.0	14	17.07	1.8
Feed	20	24.39	43	52.44	19	23.17	1.9
Disease and pest control	14	17.07	51	62.20	17	20.73	2.0
Agricultural credit and loan	65	79.27	16	19.51	1	1.22	1.2
Improved breeds	43	52.44	35	42.68	4	4.88	1.5
Housing pattern	34	41.46	42	51.22	6	7,32	1.6

3.3. Challenges faced in meeting information needs

The challenges faced by respondents in meeting their agricultural information needs is presented in Table 3. From the analysis, majority (91.5 %) of the respondents indicated that inadequate number of extension agents is a major constraint to accessing information. This implies that the limited number of extension agent available cannot adequately provide agricultural information to the pig farmers. Other major constraints include inadequate funds (78.0 %), lack of information (64.6 %), information not current/too old (57.3 %), lack of relevant materials in offices and libraries (56.1%). Providing a solution to the challenges will encourage the farmers to access and use agricultural information.

Table 3 Challenges faced by respondents in accessing agricultural information (n=82)

Challenges	Frequency	Percentage
Lack of information	53	64.6
Lack of relevant materials in offices and libraries	46	56.1
Inadequate number of extension agents	75	91.5
Lack of awareness on information sources	27	32.9
Information not current/too old	47	57.3
Inadequate funds	64	78.0
Information not easily accessible	16	19.5
Poor knowledge shearing culture	10	12.2
Time	20	24.4
Language barrier	7	8.5

3.4. Effect of the socioeconomic characteristics of respondents on their level of information need

Logistic regression was used to test the effect of respondents' socioeconomic characteristics on their level of information, and the result is presented Table 4. Out of the seven explanatory variables in the model, only two were significant; education and farming experience.

Education had a positive coefficient (1.215), significant at 10% level of probability, indicating the probability that respondents' information need increasing with their possession of formal education. Formal education will increase the desire of the respondents to search for more information, and will increase their need for agricultural information.

Farming experience had a positive coefficient (0.14), significant at a 1% level of probability. This means that there is the probability that the higher the farming experience of the pig farmers, the more their information needs. Experience implies that the farmers have a broader scope, and the more the needs they will have to enhance their production.

The pseudo R^2 for the regression is 0.288, indicating that the variables tested accounted for 28.8% of the variations in the dependent variable. The chi-square value of the model was 19.93 and was significant at a 1% level of probability. This implies that the respondents' socioeconomic characteristics affected their level of information needs of pig farmers, thus the null hypothesis for the study was rejected.

3.5. Effect of the socioeconomic characteristics of respondents on their level of information need

Socioeconomic characteristics	β	SE	W	Sig.	EXP(β)
Marital status	0.054	0.033	2.65	0.10	1.05
Age	0.040	0.073	0.29	0.58	1.04
Education	1.215	0.673	3.25	0.07*	3.36
Household size	-0.062	0.066	0.86	0.35	0.94
Farming experience	0.140	0.068	4.26	0.03*	1.15
Income	0.000	0.000	0.11	0.73	1.00
Flock size	-0.001	0.017	0.00	0.94	0.99
Contact	-3.057	1.591	3.69	0.055	0.044
χ^2 = 28.8; Sig = 0.01; Log likelihood ratio = 93.302; Nagelkerke R^2= 0.288					

4. Conclusion

This study assessed the information needs of pig farmers in Makurdi local government area of Benue State. Pig farmers formed the population of the study. Most of the respondents were married, aged between 21 and 30 years and possessed formal education. Most of the respondents had household size of 5 – 9 persons, have been farming for less than 5 years and earn income less than ₦ 250,000.

The major areas where the farmers need information are with respect to control of pest and diseases, feed and marketing of their animals. The constraints faced by the respondent in accessing information include inadequate number of extension staff, inadequate funds and lack of information. The socio-economic characteristics of the respondents that significantly affected their level of use of information are their education and farming experience.

Recommendations

Based on the findings of this research, the following recommendations are made:

- Information conveyed to pig farmers should cover areas such as pest and disease control, feeds and marketing of their animals, as these are their areas of information need.
- More extension agents should be employed to cover the gap created by inadequate number of extension staff.
- Information should be provided to the farmers at no cost, as the financial implication of accessing information is a constraint to accessing information.

Compliance with ethical standards

Disclosure of conflict of interest

There is no conflict of interest in this publication.

References

[1] Diekmann F and Batte MT. (2009). Information needs of agricultural consultants in Ohio. Journal of Extension, 49(4), 1-8.

[2] Otene VA, Okwu JO and Gwaza SS. (2015). Barriers to the use of radio as a channel of agricultural information by farmers in Ushongo local government area of Benue State, Nigeria, Journal of Agricultural and Food Information, 16(4), 326-336.

[3] Adhiguru P, Birthal PS and Kumar BG. (2009). Strengthen pluralistic agricultural information delivery systems in India, Agricultural Economics Research Reviews, 22, 71- 79.

[4] Daudu S, Chado SS and Igbashal AA. (2009). Agricultural information sources utilized by farmers in Benue state, Nigeria. Publication Agriculture and Technology, 5(1), 39-48.

[5] Shata LM and Purnima TD. (2009). Farmers' information needs in rural Manipur: An assessment. Animals of library and information studies, 56 (2), 35-40.

[6] Meitei LS and Devi TP. (2009). Farmers' information needs in rural Manipur: An assessment. Annals of library and information studies, 56, 35- 40.

[7] Adeyanju A and Akinwumi DM. (2015). Utilization of extension information among pig farmers in Oke-aro farm settlement in Ogun State of Nigeria. American Journal of Humanities and Social Sciences, 3(1), 1 – 6.

How to cite this article

Attah AJ, Otene VA and Oche ME. (2020). Assessment of information needs of pig farmers in Makurdi local government area of Benue State, Nigeria. World Journal of Advanced Research and Reviews, 6(1), 185-191.