FARMERS DEMOGRAPHIC CHARACTERISTICS, AWARENESS AND PERCEPTION OF THE RELEVANCE OF LIVESTOCK TECHNOLOGIES IN OYO STATE.

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Target Audience: Livestock farmers, extension agents, agriculture policy makers.

ABSTRACT

This paper analyses the perception of the relevance of livestock production technologies by farmers in Oyo state. A multistage sampling was employed and 120 respondents were used for the study. Percentages and chi-square analysis were employed to analyse the data.

Findings revealed that majority of livestock farmers (62.5%) recorded a low perception score. Chi-square analysis of demographic characteristics showed that level of education, farm size, and age have significant relationship with perception of livestock technologies ($X2 = 13.6$ $p < 0.05$, $X2 = 29.02$ $p < 0.05$ and $X2 = 22.07$ $p < 0.05$ respectively) while gender has no significant relationship with perception of livestock technologies ($X2 = 0.75$ $p > 0.05$). The study concludes that livestock technologies would be more result-oriented if adequate consideration is given to the demographic characteristics and perception of farmers among others which will in turn help the farmers in making decision to adopt.

Keywords: Demography, livestock, technology, awareness, relevance.

DESCRIPTION OF PROBLEM

Agricultural research is perhaps the most important single determinant of agricultural development in sub-saharan Africa. This is because no nation has been known to achieve any meaningful progress in agricultural growth without huge investment in agricultural research. In Nigeria, the food agricultural and natural resources sector occupy a central position in the economic structure. Consequently, its development has obvious implication for overall development (1). Agriculture contribute 34% of the gross domestic (GDP) 40% of export and 70% of employment (2). Technology development through research is the main stay of agricultural development and if it is removed the agricultural system will collapse. New technologies have to be constantly developed if farmers are to continue to stay in business because of new demands of agricultural systems.

Agriculture in Nigeria has been predominantly in the hand of the rural

farmers who farm at the subsistent level. Most of the food produced in the nation today are directly from the rural area hence research will go a long way in improving the lot of these rural farmers and also to improve the food situation of the country. Research can have beneficial impact at all stages in the agricultural development continuum. From food production through post harvest processing and marketing, there is a poor performance of technical packages which were supposed to generate agricultural growth and with it a higher standard of living for farm household, if they were adequately implemented.

Ekpere and Idowu (1) are of the opinion that the need for agricultural research in Nigeria has always been informed by the frequently mentioned problem of poor productivity resulting in incessant and apparently intractable food shortage. Of more importance is the way the farmers see the technologies with which to increase and subsequently conquer the problem of poor productivity. If this food shortage is to be tackled and farmers' productivity increased, access to new improved technologies is required. These technologies are derived largely from agricultural research.

ISNAR, (3) observed that research may again provide the answer to raising rural incomes. However a peculiar technology will be needed for a peculiar situation. The goal of agricultural research as enumerated (4) is the development of technologies that farmer will use to improve their welfare and that of their country. This was divided into four parts viz. development of technologies, improvement of farm family welfare and improvement of the welfare of the country. It then becomes important to examine how agricultural research affects such problems as debt repayment, environmental detonation as part of the goal that includes national welfare. If national welfare is ignored, it is unlikely that the bureaucratic process within a country will champion the technology developed even if it appears ideal for the farmer's involvement. Hence the need for the government, farmers and extension officers to be involved in the research process is made clear.

Technologies are effective only when they are workable on farmers' field and not how well they prove on research stations. If farmers will not have them for use, their development would have been in vain (4). But more terrible will it have been if the farmers perception of these technologies is not only low but wrong. Agricultural research system must therefore conceptualize an effective mechanism and capacity to not only implement the transfer of results but also measure the farmers perception of these technologies.

The fact that Nigerian population is over 100 million and that 70 percent of the population are involved in agriculture call for more research that will not only help in boosting the financial standing of these farmers but also

help in increasing food production and these technologies perception by farmers should as a matter of priority be known. The emphasis research is placing today is to assist farmers in the move from the subsistence shifting cultivation and particularly bush fallow system to more continuous productive and systematic system of soil management practices which will maintain soil productivity and minimize soil erosion and degradation (5). It also includes collection of baseline data and analysis of these data. Some of these technologies are made to be specific so as to serve best the location in which they are developed. They are also scale neutral so that a wide range of farmers can use them. The way the farmers will perceive these research results will be different hence there adoption rate.

Scientists' understanding of farmers perception about technology is often clouded by misleading metaphor which the process of technology development and delivery are described. Farmers tend to be seen as passive recipient, users of technology developed by other people. At best, it is acknowledged that some feed back on farmers reaction to a new technology, is desirable in order to refine the technology but this is likely to be regarded as a need for mere fine tuning. (6).

Research institutes have developed technologies and disseminated them through the Agricultural Development Programmes. There is need to develop a new way of making these technologies suitable to the farmers so as to increase their perception and invariably their adoption levels. Therefore, the following research questions are to be answered in this study. What are the demographic characteristics of farmers? What is the perception of members of the relevance of livestock technologies ?

MATERIALS AND METHODS

The area of study is Oyo state, and it is covered by Oyo-State ADP with four zones namely; Shaki, Ogbomoso, Oyo and Ibadan/Ibarapa zones. Oyo state lies between latitudes 70N and 903N and Longitude 20E and 40E, it is bounded in the South by Ogun State, North by Kwara State, West by the Republic of Benin and East by Osun State. The total area is about 42.862 sq km. Oyo State has two distinct climatic season which are dry season commencing from November to March and the rain season from April to October (there has been some changes in this trend as observed with the erratic nature of rainfall and general changes in weather.

Multistage random sampling method was used to select the sample size. Two (Ogbomoso and Oyo) of the existing four zones of Oyo state Agricultural development Programme were purposively selected due to the fact that they are the food basket of the state. There are 120 farmers groups in the two zones. Twelve groups (representing 10%) were randomly selected

with a total number of 1200 farmers as membership strength. Ten per cent of the farmers were randomly selected to give a sample size of 120 farmers. The data for this study was obtained from primary sources by using interview schedule for the sampled farmers. Questions were translated to Yoruba language for farmers and responses recorded in English language. The interview schedule consisted of demographic questions dealing with gender, age, farm size and educational level and non - demographic questions on the perception of the relevance of livestock technologies by farmers.

The data collected from the questionnaires were analysed using statistically tools such as frequency distribution and percentage to indicate the proportion of responses to certain demographic and non-demographic variables and Chi-square, to determine the relationship between the demographic characteristics of farmers and perception.

RESULT AND DISCUSSION

Table 1 shows that the percentage of the respondents that has no formal education is very high (65. 8 %). This could be a reflection of the low literacy level of people in the area.

The table also indicate that 57% of the respondents have farm size below 4 acres . This may be adduced to the fact that most of the farmers are relatively old and this may be due to financial constraints and lack of inputs. Also, the large amount of labour required for operation of large farm could serve as constraints. Another reason may be the tenurial system of land ownership and fragmentation of farmland. Also human activities like building of roads and industries may force people to have small farm size. Nevertheless, very few of the respondents (12.0%) cultivate above 10 acres. These may be farmers that have access to farmland because they are indigene or because they are leaders of family. Other reasons might be due to the ability of some of these people to secure loan and credit facilities by which large farm could be maintained.

Table 1: **Demographic Characteristics of Respondents**

Variables		Frequency	Percentage
Gender	Male	95	79.8
	Female	25	20.2
Age	Below 30	16	15.1
	31 -50	36	21.7
	51-70	68	57.2
Educational level	Primary	35	29.4
	Secondary	6	5.1
	No formal education	79	65.5
Farm size	Below 4 acres	68	57.0
	5-10 acres	37	32.0
	above 10 acres	14	11.0

Table 2 presents the responses of farmers on their perception of the relevance of livestock technologies. The technology on complete diet for ruminant from crop residues is perceived as the most relevant technology (41.7%). This is followed by the use of local materials for mange treatment (35.8%). Plausible reason for this may be due to the fact that feeding and health management take prominent position in livestock production. On the other hand, technology on simple housing design for snail (12.5%) and rabbit (16.7%) rearing were perceived to be of least relevance.

Table 2: Respondents Perception and Awareness of Livestock Technologies

List of Technologies	Very Relevant	Somewhat Relevant	Not Relevant	Non Response
Feed block for ruminants	31(25.8)	24(20.0)	0(0)	65(54.2)
Local alkali for farm residue treatment	34 (28.0)	30(25.0)	0(0)	56(47.0)
Complete diet for ruminant from crop residue	50(41.7)	25(20.8)	0(0)	45(37.5)
Use of local materials for mange treatment	43(35.8)	23(19.2)	0(0)	54(45.0)
Modified raised platform for sheep and goats	37(30.8)	7(5.8)	5(4.2)	71(59.2)
Simple housing design for snail rearing	15(12.5)	17(14.2)	0(0)	88(73.3)
Simple housing design for rabbit rearing	20(16.7)	12(10.0)	0(0)	88(73.3)
Least cost feed formulation for rabbit rearing	22(18.3)	5(4.2)	0(0)	93(77.5)
TOTAL SCORE				
LOW	75(62.5)			
HIGH	50(41.7)			

Table 3 shows the significance of demographic characteristics to the relevance of livestock technologies. It was discovered from the Table that gender does not have any significance to relevance and consequent perception of the technologies, in other words, this characteristic will not in any form influence the perception of the farmers to the relevance of these technologies. This may be because both men and women alike are affected by these technologies. Also, whether the farmers are married or not, will not in any way affect their perception because both of them need these technologies on their farms.

On the other hand, age, level of education and farm size were significant to the perception of relevance of livestock technologies. The effect of level of education on the perception level may be because the more someone is educated the more receptive he is of new ideas, also his scope will be widened, it then implies that the more educated one is, the more his perception of the relevance of livestock technologies would be.

Table 3: Chi-square Analysis of Demographic Characteristics and Perception of Livestock Technologies by Farmers.

VARIABLE	X2	df	p	Remarks
GENDER	0.75	1	0.39	Not significant
AGE	22.07	1	0.00	Significant
EDUCATION	13.6	2	0.001	Significant
FARM SIZE	29.02	9	0.0006	Significant

X2 = chi-square
$P < 0.05$ significant
$P > 0.05$ not significant

CONCLUSION

From the result of the study and its subsequent analysis it was observed that perception of farmers of the relevance of livestock technologies is not only affected by the demographic characteristics of the farmers but also by the source of awareness and continuous usage of the technologies. It was also discovered that the inherent characteristics of the livestock technology itself affect their perception and their relevance. The paper therefore recommends that government and research institutes should endeavor to embark on enlightenment campaign on the usefulness of livestock technologies hence the source of information of farmers should be increased.

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