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An Assessment of Farmers' Interest in University of Ilorin Poultry Research Result

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Abstract: This study assessed farmers' interest in University of Ilorin poultry research results. Specifically, it investigated the socio-economic characteristics of commercial poultry farmers, their area of interest in poultry research result, and the sources preferred for information on the area of interest. Fifty-two commercial poultry farmers were randomly selected for the study. Information was elicited through questionnaire. The data were analyzed by using frequency, percentages, ranking, and Chi square. The study showed that commercial poultry farmers in Kwara State had mean age of 41.2 years, with 84.6% who had post secondary education, 59.6% had spent less than 5 years in poultry business. About 40.4% produced a combination of layers and broilers with average of 725 birds. They were interested in research result such as: the proportion of chicken offal meal and soybean meal for best performance in broilers; response of broilers chicks to raw or processed full fat soybean supplement among others. They preferred that information on their interest be channeled through Poultry Association of Nigeria, consultants and magazines. The study suggested that ADP need to bridge gap between researches and commercial poultry farmers. Also, Agricultural Extension Department in the university should work hand in hand with Department of Animal Production to publish summary of research results in magazines.

Key words: Commercial poultry farmers, Poultry research result, ample stock

Introduction

The World Health Report (2001) asserts that Nigerian population by the year 2000 was 113.0 million with annual growth rate of 2.9%. Also, that chicken is the third food of animal origin consumed by the populace. The demand for animal protein is on the increase due to ban on importation and growth in population. For the industry to meet this demand, research result need to be utilized for improvement in production and productivity.

An important element of a successful research strategy is to ensure favourable impacts, social, economic, and environmental (ILCA, 1992). The study by Winrock International (1992) recognized that research is but one essential element along with extension, education and investment for the successful development of animal agriculture. In many cases, however, research can also act as a catalyst to expedite and ensure the success of development activities.

Technology is a major research output for the development of animal agriculture. It has been argued that an ample stock of appropriate technology is already on the shelf.

Winrock International (1992) opined that industrialized commercial production of poultry and pig meat will provide one-half of the meat requirements for sub-Sahara Africa. The commercial, poultry sector is doing business, through integrated approach of contact farming using high input in order to obtain high-output. Most commercial poultry egg and meat production is centered in the urban and sub-urban areas. However, they are neglected by the extension agency.

Eponou (1996) observed weak linkages with technology users as one of the critical factors that have hindered the effective use of agriculture research in Africa over the last three decades. In Nigeria the linkage between research, extension and farmers are weak. This may be partly due to location of different research institutions to different ministries. The research results from the university are seldom used. The Agricultural development project only chooses few specialists from university community as resource persons in the monthly technology review meetings. However there are many researches, which are unknown to the users. Feder *et al.* (1981) observed that adoption study comes after the costs are incurred and technology has been diffused. Consequently, such technological interventions often resulted in a low level of acceptance by the target groups and a lower success for development program. Batz *et al.* (2003) observed that the likely extent of future adoption of research result has a strong influence on the efficiency of research and on the results of research setting exercises. The studies by Napier and Napier (1991) and Tucker (2000) reported that farmers preferences are influenced by the characteristics of the farms and the farmers as well as the personal costs and benefits that farmer expect. Spencer *et al.* (2006) reported that chicken meat and egg producers in Australia preferred newsletter and fact sheets as method for obtaining information. Also, poultry care and management, basic diseases diagnosis and biosecurity were most popular topics for further training.

This study therefore seeks to examine commercial poultry farmers' interest in University of Ilorin poultry research result.

Objective of the study: The general objective was to assess farmers' interest in University of Ilorin poultry research result. Specifically, the study was to:

1 Investigate the socio-economic characteristics of commercial poultry farmers in Kwara State
2 Determine poultry farmers' interest in poultry research results from Department of Animal Production
3 Examine the source of information preferred by farmers on the research results.

Hypotheses tested were:

H_{O1}: There is no significant relationship between socio-economic characteristics of commercial poultry farmers and their interest in University of Ilorin poultry research result.

H_{A1}: There is a significant relationship between socio-economic characteristics of commercial poultry farmers and their level of interest in University of Ilorin poultry research results.

H_{O2}: There is no significant relationship between farm related characteristics and farmers interests in University of Ilorin poultry research result.

H_{A2}: There is a significant relationship between farm related characteristics and farmers interests in University of Ilorin poultry research result.

Materials and Methods

The study area is Kwara State, Nigeria. The population of the study consists of the commercial poultry farmers who were members of Poultry Association of Nigeria. Their names and addresses were obtained from the association register. Fifty-two farmers were randomly selected for the study. The questionnaire was used to elicit information from the respondents. The questionnaire was divided into three sections.

Section A: comprise of socio-economic characteristics such as age, level of education, years spent in poultry business, types of poultry reared, and number of poultry kept.

Section B: Consist of thirty-two poultry research results selected from students projects conducted between 1987 and 2003. There were about sixty of such projects. Only the ones, which focus on commercial poultry, were used for drafting the questionnaire. Each of research result was subjected to four level of responses which currently interested and using with a score of 4, interested with a score of 3, unsure with a score of 2 and not interested with interest scale of 1. The maximum score on the interest scale was 128 while the minimum score was 32. Section C comprise of sources preferred for information on poultry research result. Twelve sources were listed to which respondents were asked to put a tick as a show of preference. Among the sources were radio, television, newspapers, posters, magazine, pamphlet, feed sellers, extension agents, poultry association meetings, seminars, consultants and university/institute researchers. Eight agricultural extension specialists in Department of Agricultural Extension and Rural Development, University of Ilorin validated the instrument.

Results and Discussion

Socio-economic characteristics of commercial poultry farmers: Table 1a shows that majority (57.7%) of poultry farmers were between 31-50 years, 34.6% were 30 years and below while the remaining 7.7% were above 50 years. Their mean age was 41.2 years. The implication of this finding is that poultry farmers in the study area were relatively young which could promote learning new idea and use of the same. This age categories were in line with those Bekele (2005) referred to as economically active groups.

The educational status shows that majority (84.6%) had post secondary education, 7.7% each had secondary and adult education respectively. The farmers were having formal education which could enable them read and write in English language. This potential could assist in their information seeking habit and record keeping system. This may have positive effect on their capabilities to expand their poultry business.

The number of years spent in poultry business was sought. 59.6% of the farmers had put in five years and below in business, 34.6% had 6-10 years experience, while 5.8% had been keeping poultry for an upward of ten years. The implication of this finding is that majority of the farmers were young in the business.

Table 1b shows farm related characteristics which includes the number of broilers, number of pullets, total number of birds, type of birds raised by the farmers as well as the income from the poultry farms. The result shows that majority 78.1% of the farmers kept 500 and below broilers, 18.8% kept 5001-1000 birds while 3.1% reared above 1000 broilers. The implication of these findings is that farmers could increase their production provided there is adequate information.

On the number of pullet raised, majority (60.8%) had 500 and below pullets on their farm, 19.6% had 501-1000 pullets while 19.6% had above 1000 pullets. On the average, if the eggs produced by these farmers are to be related with the population of Kwara State, which is over 1.5 million, the poultry farm production is below the demand. The distribution of farmers according to type of birds raised shows that 30.8% kept layers only, 11.5% kept broilers only, 1.9% kept cockerel only, 40.4% reared

Table 1a: Socio-economic characteristics of commercial poultry farmers in Kwara State, Nigeria (N=52)

Socio-economic characteristics		%
(a)	Age (years)	
	≤ 30	34.6
	31- 50	57.7
	Above 50	7.7
	Mean age = 41.2 years	
(b)	Education status	
	Adult education	7.7
	Secondary education	7.7
	Post secondary education	84.6
(c)	Years of experience in poultry business (years)	
	< 5	59.6
	6-10	34.6
	Above 10	5.8

Source: Field Survey 2004.

Table 1b: Farm related characteristics of commercial poultry farms in Kwara State

Farm related characteristics		%
(a)	Number of broilers (N=32)	
	≤ 500	78.1
	501-1000	18.8
	Above 1000	3.1
(b)	Number of pullets (N=46)	
	≤ 500	60.8
	501-1000	19.6
	Above 1000	19.6
(c)	Maximum number of birds (N=52)	
	≤ 500	38.5
	501 - 1000	23.0
	1000 +	38.5
(d)	Kinds of bird raised	
	Layers only	30.8
	Broilers only	11.5
	Cockerels only	1.9
	Layers and broilers	40.4
	Layers and cockerels	9.6
	Broilers and cockerels	5.8
(e)	Source of income	
	There is off farm income	80.8
	Income from poultry alone	19.2

Source: Field survey 2004.

both layers and broilers, 9.6% reared both layers and cockerel, while 5.8% raised both broilers and cockerel. This result shows that the farmers rarely reared cockerel and that preference was given to combination of birds than single ones. This may be due to maturation period and rate of return on investment by the two activities. The short time maturation period of broilers and cockerel could provide finance for pullet takeoff till it break-even.

The farmers were asked for their source of income. Majority (80.8%) had off farm income in addition to poultry business while 19.2% sole by depend on poultry business.

Farmers level of interest in poultry research result: Table 2 shows that farmers though negligible in member have interest and are currently using all the research results. The mostly used by 32.7% of farmers among the research result was the influence of auto stress administration on performance and egg characteristics of black olympion layer. Fourteen items out of 32 were of interest to the farmers. This judgment was based on the mean rating, which were above 2.5. The research results were ranked 1st – Evaluation of leg weakness susceptibility in broiler strains with MR = 3.0, ranked 2nd Influence of Anti-stress administration on performance and egg characteristics of black Olympian layer with MR = 2.9. Three items were ranked 3rd with MR = 2.8. These are: Effect of lighting Regiment on the performance of Broiler chicks; Sources of dietary calcium for laying hens without detrimental effects on performance or nutrient retention; Poultry feed production based on volume of ingredient. Five items were ranked seventh with MR = 2.7. These are:

Effect of hen's weight and time of lay on some egg production traits; time -feeding regiment that gives the best meat to bone ratio in broiler; effect of excitation and dressing time on microbial load and carcass evaluation of broiler chicken; the graded level of novel protein concentrate (chicken offal meal + soyabean meal) to beefed to broilers that will give the best performance, egg quality traits as influence by floor and cage system of housing. Three items were ranked 12th: Response of broilers or cockerels feed with different sources/levels of dietary Vitamin/mineral premises; response of broiler chick to raw or processed full fat soybeans supplement; the effect of tendering agent on the cooking qualities of spent layer meat.

The farmers were not sure of their interest in eighteen items. The implication of this result is that if the agricultural development project had diffused all the research results to commercial poultry farmers it would have resulted in low acceptance. The fact that farmers were interested in fourteen items of poultry research results out of Thirty-two support Feder *et al.* (1981) that low level of acceptance by target group and a lower success for development program if adoption study came after the technology had been diffused.

Table 3 shows the source preferred by farmers for information on poultry research results. Consultancy agents and poultry association meetings were preferred by 65.4% of the farmers. The implication of this is that extension agents if brought into the picture of these research results could reach many of these farmers as a group within a short time. Preference for seminars was shown by 63.5% of the respondents while 53.8% preferred magazine publications,. Television attracted 53.8%of the respondents, 51.9% preferred newspaper while 50% preferred extension agents. The commercial poultry farmers seem to repose great confidence in their professional association as a source of information than any other. Also, the preference for seminar may be due to its avenue for face to face interaction between

Table 2: Farmers interest on University of Ilorin poultry research results

Research results	Currently interested and using %	Inter-ested %	Unsure %	Not inter-ested %	Mean rating	Rank
Evaluation of leg weakness susceptibility in broiler strains	7.7	46.2	25.0	21.1	3.0	1st
Influence of Anti-stress administration on performance and egg characteristics of black Olympian layer.	34.6	40.4	9.6	15.4	2.9	2nd
Effect of lighting Regiment on the performance of Broiler chicks.	32.7	38.5	9.6	19.2	2.8	3rd
The effect of different preservative methods on the shell life of shelled egg	25.0	50.0	7.7	17.3	2.8	3rd
Sources of dietary calcium for laying hens without detrimental effects on performance or nutrient retention	19.2	53.9	19.2	7.7	2.8	3rd
Poultry feed production based on volume of ingredient	26.9	41.2	11.5	17.3	2.8	3rd
Effect of hen's weight and time of lay on some egg production traits.	23.0	38.5	25.0	13.5	2.7	7th
Time -feeding regiment that gives the best meat to bone ratio in broiler	17.3	44.2	27.0	11.5	2.7	7th
Effect of excitation and dressing time on microbial load and carcass evaluation of brofler chicken	5.8	51.9	26.9	15.4	2.7	7th
The graded level of novel protein concentrate (chicken offal meal + soyabean meal) to beefed to broilers that will give the best performance	11.5	57.7	15.4	15.4	2.7	7th
Egg quality traits as influence by floor and cage system of housing	26.9	46.1	13.5	13.5	2.7	7th
Response of broilers or cockerels feed with different sources/levels of dietary Vitamin/mineral premises.	21.1	38.5	15.4	25.0	2.6	12th
Response of broiler chick to raw or processed fulfat soybeans supplement.	9.6	55.8	15.4	19.2	2.6	12th
The effect of tendering agent on the cooking qualities of spent layer meat	11.5	53.9	15.4	19.2	2.6	12th
The graded level of novel protein concentrate (fish offal meal (FOM) + soybeans meal (SBM) fed to cockerel chicks for 6 weeks without negatively affecting performance and at least cost of production	15.4	40.4	21.1	23.1	2.5	15th
Effect of change over time from starter to finisher ration on the growth of broilers	19.2	46.2	17.3	17.3	2.5	15th
Egg quality traits as influence by source of egg (local chicken, Guinea fowl, Duck and exotic chicken)	13.5	42.3	26.9	17.3	2.5	15th
Effect of stacking method on the characteristics of poultry Utter.	15.4	42.3	19.2	23.1	2.5	15th
The percentage of decomposed rumen content finishing broiler can tolerate ,to replace wheat offal's in the diet without adverse effect on performance	7.7	44.2	25.0	23.1	2.4	19th
The percent of rice brain that can 20% of diet and give better performance and reduces production cost by about 9% maize in broilers	7.7	50.0	15.4	26.9	2.4	19th
The percent brewer's dried grains can replace or groundnut cake without a detrimental effect on the performance of finishing broilers	11.5	38.5	26.9	23.1	2.4	19th
Effect of varying the regiment of nutrient restriction or duration of skip -a –day feeding on food in take and abdominal fat of broilers	19.2	26.9	15.4	38.5	2.3	22nd
The need to further fermentation time to detoxify the thevetia seed before the cake can be used for commercially in poultry diets.	5.8	44.2	26.9	23.1	2.3	22nd
The range of rice husk inclusion with Rozayme 'G' in broiler feed that will give a better performance and economical	11.5	30.8	30.8	26.9	2.3	22nd
Effect of hen's weight and some laying characteristic on fer	17.3	21.2	38.5	23.0	2.3	22nd
Effect of bread, diet and sex on the performance of chickens	15.4	25.0	40.4	25.0	2.3	22nd
Effect of varying dietary protein level, sex and Genotype on heterosis in the domestic fowl	7.7	36.5	26.9	28.8	2.3	22nd
Effect of feeding fermented or cooked caster seed cake on performance ' and carcass evaluation of broilers.	1.9	42.3	30.8	25.0	2.2	28th
The percent of blood rumen content mixture broilers can tolerate in their diet without adverse effect	1.9	38.5	30.8	28.8	2.1	29th
Replacement effect of Teminala catappa fruit waste for maize on performance in pullet chicks	5.8	21.2	51.9	21.1	2.1	29th
The level of boiled castor seed cake broiler diet that give good performance characteristics, apparent nutrient retention and haemotologied indices.	3.8	23.1	42.3	30.8	2	31st
Effect of feeding cowpea testa supplemented with Roxazyme 'G' on performance, carcass characteristics, blood constituents and organ measurement	7.7	15.4	36.5	40.4	1.9	32nd

Table 3: Sources of information preferred by farmers on poultry research results.

Source	%
Poultry association meetings	65.4
Consultancy agents	65.4
Magazine	63.5
Seminars	63.5
Television	53.8
University researchers	53.8
Newspaper	51.9
Extension agents	50.0
Radio	46.2
Feed sellers	46.2
Pamphlet	44.2
Posters	36.5

Source: Field survey 2004.

Table 4a: Chi-square value for testing hypothesis on personal characteristics and farmers interest in university of Ilorin poultry research results

Characteristics	Chi^2	Df	P-value
Age*	29.812_S	2	0.000
Education status	-0.096_{NS}	2	0.499
Year of farming experience	-0.089_{NS}	2	0.529

S* = significant at $P \leq 0.05$
NS = not significant at $P \leq 0.05$

Table 4b: Farm related characteristics and farmers interest in University of Ilorin Poultry research results

Farm related characteristics	Chi^2	Df	P-value
Kind of bird	0.127_{NS}	2	0.370
Other source of income	0.034_{NS}	2	0.812
Number of broilers	-0.06_{NS}	2	0.668
Maximum number of bird	0.067_N	2	0.635
Number of pullets			

stakeholders. The percentage of those who preferred extension agents were average due to the fact that small scale farmers are the focus of the extension agency. The research results could be taken to poultry association meeting with researcher as resource person while the extension agents could make it available in form of magazine and seminars. Farmers as information sources did not prefer radio, feed sellers, pamphlets and posters. This findings differ from the report of Spencer *et al.* (2006) that chicken meat and egg producers preferred newsletter and fact sheet for obtaining information.

Hypothesis testing:

H_{O1}: There is no significant relationship between ages, educational status, years of farming experience and farmers' level of interest in University of Ilorin poultry research results.

Decision: There is a significant relationship between age and farmers' level of interest in University of Ilorin poultry research result. It implied that age could be considered as a factor in preparing materials for farmers' education. This result support the works of Swanson *et al.* (1999) farmers' interest in specialty crops is significantly associated with younger age but differ with respect to level of education.

H_{O2}: There is no significant relationship between farm related characteristics and farmers level of interest in university poultry research result.

Decision: Null hypothesis holds. It implied that farm related characteristics might not be considered in mounting program for the poultry farmers. This may be due to the possibilities of the farmers to modify their business base on information at hand.

Conclusion: The findings of this study establish the fact that common poultry farmers in Kwara State of Nigeria were middle age people of 41-50 years, they had formal education with majority having post secondary education, and they have put in five years and below in the poultry business. They are in interested in six of the University of Ilorin poultry research results would prefer that information on poultry research results reach them through Poultry Association of Nigeria.

Recommendation

1. There should be link between the Department of Animal Production where the researches were conducted and Department of Agricultural Extension and Rural Development of the same faculty.
2. Both departments should fashion out how research results could be produce in a magazine and the frequency of production.
3. The Agricultural extension agency could use the group approach to reach these categories of farmers on their association meetings with desired technology.
4. The research results in university should be made available to both extension agency and farmers.

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