E3 Journal of Agricultural Research and Development Vol. 1(1). pp. 001-008, December, 2011
Available online http://www.e3journals.org/EJARD

Full length research paper

Poultry farmers' awareness and knowledge of improved production practices in Afijio, local government area, Oyo state, Nigeria

Oyeyinka, R. A[1*]. Raheem, W. K[2]. Ayanda, I. F[3]. and Abiona, B. G[3]

[1]Department of Agricultural Administration, University of Agriculture, Abeokuta, Ogun State, Nigeria.
[2]Department of Agricultural Technology, Oyo State College of Agriculture, Igboora, Oyo State, Nigeria
[3]Department of Agricultural Extension and Rural Development, Kwara State University, Ilorin, Nigeria

Accepted 1 November 2011

The study was conducted to determine the awareness and knowledge of poultry production techniques of farmers in Afijio Local Government Area, Oyo State, Nigeria. A purposive sampling procedure was used to select 85 poultry farmers who were interviewed for the study. Findings revealed that majority of the poultry farmers were male within the age bracket of 30 – 39 years and were literate. Majority of the farmers did not belong to any poultry association (65.1%), and (69.9%) of them preferred the keeping of Layers than any class of poultry production. Poultry farmers showed a high level of awareness of the production techniques on improved/automatic housing (85.1%), feeds and feeding (88%) and daily routine operation (80.7%). However their awareness of diseases/parasites (13.3%) and marketing strategies (14.5%) was very low. Farmers were of the opinion that radio (92.7%) and Television (90.3%) were the main source of their awareness on poultry production techniques. Also, inadequate capital (83.2%) and high cost of feeds (86.8%) were the most severe constraints encountered by the farmers in their operation. Findings also showed that there was no significant relationship between poultry farmers age and awareness of poultry production practices ($r = 0.145$, $p < 0.05$), however, a significant relationship exists between farmers' attitudes and awareness of improved poultry production practices, ($r = 0.455$, $p > 0.05$). It is therefore recommended that, the extension agents should be encouraged to focus their extension activities on the poultry farmers who are not aware of their programs.

Keywords: Poultry; Awareness; Production; Techniques and Knowledge.

INTRODUCTION

The word "poultry" is applicable to chicken or domestic fowl. The domestic fowl is the commonest avian species raised in most countries such as Nigeria for either table meats or for eggs or both for human consumption throughout the world, the domestic fowl is unique for its use for both meat (e.g. turkey, duck and guinea foul) and egg production. Some strains of ducks notable Khaki Campbell and Idian Runners are exception. They excel the egg laying strains of the domestic fowl in egg production. The Khaki Campbell laying duck can lay as many as 360 eggs per annum while the white leghorn layer can lay up to 230 eggs (Stanley, 2002).

Poultry farming has now developed into a commercial enterprise involving thousands of birds. Large poultry units have replaced the backyard poultry units while more efficient strains of meat or egg type birds, balanced feed, intensive housing and better poultry equipment came into use by farmers. Nevertheless, commercial poultry farming has not been fully developed in the tropics unlike the temperate regions. The bane of this is attributed to several reasons. The Nigerian poultry industry is less

*Corresponding Author E-mail: akinoye2009@gmail.com; Phone: +23408033798232

capitalized and it is based on small holdings owned by the peasant farmers. Birds usually perform at a low level and hence, production cost is higher and consequently selling prices of poultry products are higher beyond the reach of average Nigerians. Thus, per capital consumption of poultry products is lower in most tropical countries, thereby giving rise to protein deficiency factors in food in these countries since feed cost represent over 70% of the total cost of poultry production, reduction in feed cost is expected to reduce production cost and hence lower the prices of poultry products within the range that an average Nigerian can afford thereby increasing the per capital consumption of the products, (Gerry, 2001). The poultry industry has many branches but the two main branches are egg and table meat production. The other branches include the production of chicks, point of lay by pullet or ready lay birds, poultry feeds, manufacturing of poultry equipments and the processing, marketing of eggs and table birds.

Poultry manure is a cheap source where poultry farmers can earn income in addition to what they realize from the sales of their products. For instance, Fulhage (1992), declared that the basic nutrients in animal manure (N,P,K,) are the same as in commercial fertilizer and are equally effective in promoting plant growth. Also, animal manure may be utilized as a fuel as in the UK, for example, a company known as Fibrominn, a subsidiary of Fibrowatt has been operating power plants fuelled by poultry litter to generate electricity for more than a decade. The company has signed agreements to build poultry litter fuelled power plants in Mississippi, among the top ten poultry producing states in the USA (Hill, 2002). Another alternative use of poultry and swine manure is the production of methane from anaerobic fermentation. The micro-biological process by which methane is produced from animal wastes has been practiced in many parts of the world for decades as a means of providing fuel for cooking food, powering motor vehicles and generating electricity (EL Boushy and Van Der Poel, 2000; Pond and Pond, 2000).

However, Ukagha (2003), opined that markets and marketing are a major driving force for the expansion of livestock production. What it does is that whatever is produced must find a market otherwise the level of production cannot be sustained. Many countries use price support and subsidies to stabilize output and prices of meat and milk. In Switzerland for example, the Government pays $2000 per cow per annum to keep the dairy farmer in production. What is most needed is the development of infrastructure in livestock markets, abattoirs, processing plant and storage facilities together with price incentives. The ultimate objective of this measure is to position the livestock industry in Nigeria to compete effectively with the imported commodities from around the world.

Poultry production in all its ramification represents one of the viable farming enterprises providing the much needed animal protein sources (table egg and meat) to ameliorate the protein deficiency factor in Nigerian food crisis. However, commercial poultry production is faced with many problems, such as high cost of feeding and veterinary drugs, poor quality of commercial feeds due to formulating abuses of the manufacturers, inadequate capital investment and lack of knowledge of nutrients and energy requirements of the various classes of poultry. Diseases/parasites, mortality, high cost of fixed inputs as said by Aromolaran (1999), give poultry farmers serious challenges and thus, hinder the poultry business. This culminates to low production and subsequently reduced income which frustrates the business venture and sometimes lead to financial bankruptcy. Technical proficiency usually account for most crises experienced in poultry production. Therefore, there is the need for a diagnosis in the area of poultry production technique by the commercial poultry farmers and thus identity deficiencies and solutions to them if the poultry enterprise is to be profitable and maintained.

Objective of this study

The Study examine poultry farmers' awareness and knowledge of Improved poultry production techniques in Afijio Local Government, Area, Oyo State; Specifically the study attempted to:

1. Determine the personal characteristic of poultry farmers
2. Determine the awareness level of poultry farmers in the study area.
3. Investigate how small scale poultry farmers perceived their knowledge of poultry production techniques.
4. Investigate the constraints faced by poultry farmers in the study area.

Research Hypotheses

H01: There is no significant relationship between the selected personal characteristics of the respondents and awareness of improved poultry production practices.
H02: There is no significant relationship between poultry farmers' attitudes towards improved production practices and awareness of poultry production variables.

METHODOLOGY

The study was conducted in Afijio Local Government Area of Oyo State, Nigeria. It lies in the South – Western Zone of the State, which is roughly enclosed by latitude 7.8^0 and 4.4^0 North of the equator. It covers a total land

Table 1. Frequency distribution of the respondents in respect of personal characteristics. (n = 83)

(a) Age (yrs)	Frequency	Percentage (%)
20-29	30	36.1
30-39	36	43.4
40-49	14	16.9
50-59	3	3.6
(b) Gender	**Frequency**	**Percentage (%)**
Male	55	66.3
Female	28	33.7
(c) Marital Status	**Frequency**	**Percentage (%)**
Single	18	21.7
Married	55	66.3
No response	10	12.0
(d) Educational level	**Frequency**	**Percentage (%)**
NCE and above	45	54.2
Grade ii and secondary education	25	30.1
Others	08	9.7
No response	5	6.0
(e) Family size	**Frequency**	**Percentage (%)**
1-4	40	48.2
5-6	12	14.5
7 and above	3	3.6
No response	28	33.7
(f) membership of poultry association	**Frequency**	**Percentage (%)**
Yes	29	34.9
No	54	65.1

Source: - Field Survey, 2010

mass of 1.365 square kilometers, with about 30 towns and villages. Afijio Local Government Area has a population of 84,504 (2006, NPC). The local government is bounded in the West by Akinyele Local Government, in the East by Oyo West Local Government, in the North by Iseyin Local Government and in the South by Lagelu Local Government. Major towns in the Local Government include, Akinmoorin, Aawe, Ilora, Ilu-Aje, Imini, Iware, Jobele and Fiditi. The major occupation of the peoples is farming, where by the major crops grown are fruits and vegetables. Also many of the people in the local government are involved in livestock production like poultry and fishery.

Afijio Local Government was specifically selected for this study because of its contribution to the Poultry Industry in Nigeria and high concentration of poultry farmers within the area. The local government houses big poultry farms like Amo Byn Nigeria Limited, Folawiyo's Farm Nigeria Limited among others. Also the climate of this area has been adjudged to be the most suitable for poultry production in the south – western Geo – political zone of Nigeria. Through the assistance of the extension agents working in the local government area, the snowball sampling technique was used to select eighty(85) medium and small scale poultry farmers from the five (5) major towns in the study area. These are Ilora (40), Aawe (20), Akinmoorin (15), Fiditi (05) and Jobele (05) respondents for the study. These towns were purposively selected for the study because of the high concentration of poultry farmers in the area. A research – made, validated questionnaire with reliability co – efficiency value of 0.80 was used for collecting the data on the objectives of the study. Data collected were analyzed with the use of descriptive statistics like frequency counts, percentages, and inferential statistics like chi–square = X^2 and PPMC.

RESULTS and DISCUSSION

Personal characteristics of respondents

The personal characteristics examined include age, gender, marital status, level of education and family size of the respondents (Table 1). The results revealed that majority were within the age range of 30 – 39 years,

Table 2. Frequency distribution of the respondent in respect of number and class of birds used in production. (n = 83)

(a) Number of birds at the start of the business	Frequency	Percentage
50-100	54	65.1
101-200	16	19.3
201-300	5	6.0
301-400	1	1.2
No response	7	8.4
50-100	54	65.1
101-200	16	19.3
201-300	5	6.0
301-400	1	1.2
No response	7	8.4
(b) Number of birds at present	**Frequency**	**Percentage**
100-300	26	31.3
301-500	28	33.7
501-700	12	14.5
701-900	8	9.6
901-1100	2	2.4
1100 and above	5	6.1
no response	2	2.4
(c) Types/class of poultry being raised	**Frequency**	**Percentage**
Layers	58	69.9
Broilers	7	8.4
Cockerels	17	20.5
No response	1	1.2

Source: - Field Survey, 2010

66.3% were male while 84.3% of them were well educated. The implication of this findings is that majority of the respondents might have acquired knowledge and skills involved in poultry production through various forms of education they acquired during schooling. The results further showed that 48.2% of the respondents have family size of 1 – 4 that help them on their poultry farms. Only a few 3.6% have a family size of 7 and above. The results also showed that majority of the poultry farmers 65.1% did not belong to any poultry association indicating that the association had no benefits to the farmers, hence reason why they were reluctant to be members of the poultry association.

Number of birds at the start of the business.

Table 2 shows that 65.1% of the respondents started poultry business with 50-100 birds while 26.5% started with 101-400 birds. The finding implies that majority of the respondents started as small-scale farmers. This was probably when they were still learning the basic tenets of the profession.

Number of birds at present

Table 2 indicates that majority of the farmers (89.1) keep between 100 and 900 birds as at the time of the study and while 2.4% keep 901-1100 birds, 6.1% keep above 1,100. The finding shows that the poultry business is profitable to some extent if the number of birds at present is compared to the number of birds at the start of the business.

Types/class of poultry being raised

Table 2 reveals that majority of the respondents (69.9%) are keeping layers while minority of 28.9% are keeping broilers and cockerels. Considering the finding, it is likely that keeping layers is profitable to the farmers more than broilers and cockerels in the study area. Also people in the study area may rely on other sources of meat like cattle and goat that are cheaper when compared to chicken that is taken mostly during the festive periods. This leaves eggs that have no substitute, as a viable product which may be sold locally or in other areas.

Awareness of poultry production practices

The respondents that scored average and above were categorized as those that have high awareness of poultry production practices while those that scored below

Table 3. Awareness of poultry production practices

Poultry Production practices	Low awareness	Percentage (%)	High Awareness	Percentage (%)
Improved/automatic housing system	12	14.5	71	85.5
Feeds and feeding	10	12.0	73	88.0
Diseases/parasites prevention and control	72	86.7	11	13.3
Daily and special routine operations	16	19.3	67	80.7
Vital poultry records to be kept	23	27.7	60	72.3
Marketing strategies	71	85.5	12	14.5

Source: - Field Survey, 2010

average were categorized as the ones that have low awareness of poultry production practices.

Awareness on Improved/automatic housing system

Table 3 shows that 85.5% of the respondents have high awareness of improved housing system for keeping their birds while others (14.5%) have low awareness of it. This indicates that majority of the poultry farmers are aware of improved poultry houses like deep litter, battery cage system.

Awareness on Feeds, feeds preparation and feeding methods of the birds

Table 3 indicates that majority of the respondents (88.0%) are highly aware of feeds, feeds preparation and feeding method of the birds while 12.0% have low awareness of it.

Awareness on Disease/parasite prevention and control

Table 3 reveals that majority of the respondents (86.7%) have low awareness of various diseases, parasites and their preventions/controls while (13.3%) are highly aware of it. This finding indicates that the issues of disease and parasite prevention and control go beyond the knowledge of ordinary poultry farmer except being a veterinarian or otherwise, receive adequate information, knowledge and skills from the extension agents will go a long way in creating the awareness and control of diseases and parasites.

Awareness on daily and special routine operations

Table 3 shows that 80.7% of the respondents have high awareness of the daily and special routine operations involved in poultry production while the minority (19.3%) have low awareness. The finding is a revelation of necessary operations like changing of litters, cleaning of cobwebs, regular supply of feeds and water, evacuation of dead birds, collection of eggs, debarking, vaccination, despairing, delousing, culling and daily keeping of records, that majority of the farmers are aware of and that 19.3% that have low awareness of the operations are likely to be those that are just part time that have no time for the business but who rely on hired labor alone.

Awareness on vital poultry records to be kept

Table 3 shows that majority of the respondents (72.3) have high awareness of vital records to be kept in poultry production while 27.7% have low awareness of vital records to be kept in poultry production. The finding is an indication that majority of the small scale poultry farmers in the study area are aware of record keeping. Though, they might not know the recording strategies, however, they keep records. Others that are not aware of it might be those with lower educational background and who do not take poultry business as priority for their means of livelihood.

Awareness on marketing Strategies

Table 3 indicated that majority of the respondents (85.5%) have low awareness of marketing strategies of the poultry and poultry products while 14.5% of the respondents are highly aware of it. This is an indication that the respondents have not been gaining up to the expected profits and that they are adopting poor marketing strategies of their products.

Sources of awareness of poultry information on production techniques

Table 4 shows, that a higher percentage (92.7%) of the

Table 4. Sources of awareness of poultry information on production techniques

Awareness sources	Yes	No	Row total %
Radio	77(92.7)	06(73)	83(100)
Television	75(90.3)	08(9.7)	83(100)
Extension Agents	25(30.1%)	58(69.9%)	83(100)
Family/Friends	23(27.7)	60(72.3)	83(100)
Veterinary officers	15(18.9)	68(81.9)	83(100)
Poultry Association	43(51.8)	40(48.2)	83(100)
Feed Millers	15(18.9)	68(81.9)	83(100)

Source: - Field Survey, 2010

Table 5. Attitude of the poultry farmers towards improved poultry production practices

Attitude	Frequency	Percentage
Unfavourable	25	30.1
Favourable	58	69.9

Source: Field Survey 2010.

farmers became aware of the recommended practices through Radio and (90.3%) from Television while a very few (18.9%) were aware of the practices through veterinary doctor and feed millers. Also those who got their awareness from the extension agents are few (30.1%). This is an indication that the extension agents in the area have not been disseminating adequate information on poultry production techniques.

Attitude of the poultry farmers towards improved poultry production practices

Table 5 shows that, 30.1% of the respondents have unfavorable attitude towards improved poultry production practices while 69.9% showed favorable attitude towards improved poultry production practices in the study area. The finding reveals that majority of the respondents showed favorable attitude to improved poultry production practices which is an indication that majority of them want changes in respect of modern management practices of poultry production. Farmers that showed unfavorable attitude towards improved poultry production practices might be those that take to poultry business as part – time for means of livelihood.

Constraints faced in poultry production by poultry farmers

Table 6 shows the major constraints encountered by the farmers in the poultry business. The table shows that, inadequate capital (83.2%), high cost of feeds (86.8%) and marketing problems (81.9%) were the most severe constraints. Also, inadequate water (84.4%), diseases and parasites (78.4%) and poor weather condition (81.9%) were the partially severe constraints encountered, while problem of labour supply (74.7%), lack of veterinary knowledge (86.8%) and pilfering and theft (84.4%) were the constraints that were not severe for the poultry enterprises.

Hypothesis testing

In table 7, the chi – square(X^2) analysis reveals that at ($P > 0.05$) there is no significant relationship between sex and awareness of improved poultry production practices. The implication of this is that sex i.e. male or female does not have anything to do with poultry practices' awareness of the farmers. However, there is a significant relationship at ($P < 0.05$) between marital status, levels of education and farmers' awareness of poultry production practices. This is an indication that the duo (marital status and level of education) had influence on farmers' awareness of various poultry production practices.

In table 8, the PPMC analysis given $r = 0.162$ and $p=0.145$ shows that there is no significant relationship between poultry farmers' age and awareness of poultry production practices. This implies that poultry farmers' age had no influence on their awareness of poultry production practices. However, the PPMC (r) analysis in table 8 also shows that ($r = 0.455$, $p = 0.001$), there is a significant relationship between poultry farmers' attitudes towards improved production practices and awareness of poultry production variables. This implies that as awareness of poultry production practices increase, attitude of the small scale poultry farmers increases and vice versa.

Table 6. Constraints faced in Poultry Production by Poultry Farmers

Constraints	Not severe	Partially severe	Severe
Inadequate capital	10(12.0)	04(4.8)	69(83.2)
Inadequate of water supply	08(9.6)	70(84.4)	05(6.0)
High cost of feeds	07(8.4)	04(4.8)	72(86.8)
Marketing problems	09(10.8)	06(7.2)	68(81.9)
Disease & Parasites	08(9.6)	65(78.4)	10(12.0)
Labour supply	62(74.7)	10(12.0)	11(13.3)
Lack of credit facilities	15(18.1)	58(69.9)	10(12.0)
Poor weather condition	08(9.6)	68(81.9)	07(8.4)
Lack of veterinary knowledge	72(86.8)	8(9.6)	3(3.6)
Pilfering & theft	70(84.4)	05(6.0)	08(9.6)

Source:- Field Survey, 2010

Table 7. Chi-square results of relationship between personal characteristics of the respondents (sex, marital status, level of education) and awareness of poultry production practices

Variables	χ^2	Df	P	Decision	Remark
Sex	0.145	1	0.703	NS	Accept
Marital status	6.136	1	0.013	S	Reject
Level of education	19.679	5	0.001	S	Reject

Table 8. Pearson Product Moment Correlation (PPMC) test of relationship between awareness of poultry production practices and personal characteristics of the respondents

Variables	r	P	Decision
Age	0.162	0.145	Not significant
Attitude	0.455	0.001	Significant

Source: Field Survey (2010).

Conclusion and Recommendations

The study concludes that majority of the farmers were aware and adhere to poultry production recommended practices and that their source of poultry production practices were radio, television, feed millers, and extension agents. The study also concludes that the knowledge of poultry production practices was very high on improved automated housing, however majority of the poultry farmers were of the opinion that they are not aware of diseases/parasites and marketing strategies and production techniques. Based on the findings of this study it is recommended, that government should provide veterinary personnel who will intimate the farmers of the routine management of poultry. Poultry farmers should be encouraged to join or form associations as this will foster unity among them, and enable them to benefit from government subsidies and loans. Also the extension agents should be encouraged to focus their extension activities on the poultry farmers who are not aware of their programmes.

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