

Entrepreneurial Skills Need by Broiler Farmers in Poultry Production for Food Security in Akwa Ibom State, Nigeria

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Abstract

The main purpose of the study was to identify the entrepreneurial skills required by broiler farmers in poultry production for food security in Akwa Ibom State. Four research questions were posed and four null hypotheses were formulated to guide the study. The population was made up of 386 broiler farmers in Uyo Agricultural Zone in Akwa Ibom State. The sample size was 294 broiler farmers selected using cluster sampling method. The study adopted the descriptive survey research design. A questionnaire titled: Broiler Production Skills Requirements Questionnaire (BPSRQ) was used for data collection after due validation by experts. The instrument was tested to establish the reliability using twenty broiler farmers who were not used in the main study. The Cronbach Alpha approach was used to establish the reliability coefficient of the instrument. Broiler Production Skills Requirements Questionnaire (BPSRO) was found to be 0.71. The findings reveal that the broiler farmers in Uyo Agricultural Zone of Akwa Ibom State require more training on stocking and drugs administration skills in poultry production for increased food security. It was recommended among others that more extension services and private sector participation in training activities should be encouraged by government to boost broiler production skills for food security in Akwa Ibom State.

Keywords: entrepreneurial skills, needs, broiler farmers, poultry production, food security

Introduction

Entrepreneurship has become the most reliable employment strategy that can lead to food security enhancement. This is because only entrepreneurial education guarantees self employment, which in turn provides people and their families with the potentials to create and manage businesses in which they can function as the employer or boss, rather than merely being an employee. Uya and Ambang (2016) affirmed that entrepreneurship education involves a special training given to students to enable them acquire the skills, ideas and managerial abilities and capabilities for employment rather than being employed. Therefore, the need to acquire and develop specific entrepreneurial skills cannot be neglected because entrepreneurship is vital to creating employment and indeed a special form of employment for citizens.

In recent years, there has been renewed interest in agriculture by the government, non-governmental organizations (NGOs) and private individuals as a key driver of development, poverty reduction, food security and above all wealth creation (Nsa and Ikot, 2013). The growth generated by agriculture is more effective in creating wealth and it generates greater improvement for the peasant farmers particularly in agricultural based economies (FAO, 2011). It has been estimated that about 6% of Nigerian rely on agriculture for their livelihood and most of them live in rural communities which are prone to poverty (Okorie, 2007). It is therefore necessary to enhance their skills to ensure improvement in the level of production thereby creating wealth. Most poultry farmers who are involved in broilers production do not possess adequate skills and therefore unable to create wealth for themselves and enhance food security. The concept of skill acquisition in poultry production has to do with the ability to do or to perform an activity that is related to some meaningful exercises, works or jobs in poultry production (Uko, 2014). It is the process of bringing together creative and innovative ideas and coping with management and organizational skills in order to meet an identified need thereby

attaining food security. Food security means that all people at all times have physical and economic access to adequate amount of nutritious, safe and culturally appropriate food which are produced in an environmentally sustainable and socially just manner, and that people are able to make decisions about their food choices. Eze and Muoneke (2014) defined food security as coming to bear when all people at all times have access to sufficient, safe, nutritious food to maintain a healthy and active life. Food security is concerned with not only supply but also safety to human society and the environment.

Ikeoji and Iwelunmor (2014) observed that production enterprise hinges upon the possession of a set skill. The challenge of unemployment can best be tackled by equipping farmers with saleable skills that can be used in achieving food security especially through poultry production. According to Onuka and Olaitan (2017) poultry production skills are those skills needed by farmers to plan, create, establish and successfully run poultry enterprise using human and non-human resources. The skills are planning, organization and implementation. Nsa and Ikot (2013) affirmed that poultry production occupies a unique position in the livestock industry and it involves management practices such as planning, supervision, coordinating and marketing of the products. Poultry farming starts from planning for the pen (farm house), provision for the feeding troughs, drinkers, the medication, as well as provision for their hygiene. In the layers' unit, provision is made for collection of eggs and marketing. While in the broilers' unit, its management starts from the day old through maturity to marketing of the birds. This is why Eze and Muoneke (2014) affirmed that a profitable poultry production demands a mastery of management skills from individuals aspiring to venture into poultry production.

Yaaghubi, Chizari, Pezshkiral and Foeli (2007) observed that housing in poultry production is a key factor in the performance of the birds. In a study on poultry management indices, housing is

the determinant factor for meeting the expected returns in the poultry production enterprise. Yusuf and Malomo (2007) asserted that housing location is the starting point in poultry business and it is of critical importance in the overall performance of poultry enterprise.

Orok (2012) in a paper entitled “Practical tips in Poultry farming” stated that in sitting a poultry house, care must be taken to ensure that poultry pen construction follows the east-West orientation. This is to prevent direct sunrays into the pen as this would affect production especially in the laying birds (layers). Mirakzadeh, Ghyasvand, Karami and Papzan (2010) in a study on analysis of factors affecting performance of industrial poultry production in the Kermanshah township, observed that housing, feed management, drug administration and stocking skills are very relevant in poultry production for farm operators to acquire in order to take better decisions. These skills enable the farmers to manage poultry farms effectively. The skills if acquired would enable them to face changes in agriculture business environment and remain in high standing of business. Mittila, Kaustell, Leppala, Hurme and Suutarian (2007) observed that poultry farmers trained on the skills related to poultry production by extension service providers, has facilitated and improved the management abilities of farm operators. This can help the farmers in taking better and informed decisions and to apply the skills in designing and building better housing structure, feeding management, stocking and drug administration towards better performance and higher productivity in poultry business.

Onu (2006) in a work on practical tips to successful entrepreneurship disclosed that skills acquisition is important in any business. Onu listed skills like critical and creative thinking skills, practical skills and managerial skills as a requisite for any good performance. Entrepreneurship education provides clientele with the knowledge, skills and motivation to encourage entrepreneurial successes in a variety of settings. Acquisition of poultry production skills

enhances the performance of broiler farmers and affords them the confidence to use the skills acquired in improving their socio-economic condition and also increase protein intake.

Many studies indicated that the food of most people all over the world (especially developing countries) is suffering from protein deficiency and since protein especially animal protein play important role in human nutrition, the quality and quantity must be met in human nutrition (Orok, 2012). Poultry and poultry products businesses therefore offer the easiest alternative to meet their short fall. The term poultry refers to any type of domestic birds kept for meat or egg production such as fowls or chickens, ducks, geese, turkeys, guinea fowls and pigeons. Fowl or chicken is however the commonest as they are kept by nearly every household.

The Nigeria business environment provides opportunities for entrepreneurial success across all economic sectors. However, inadequate entrepreneurial skills and strategies among some farmers, limits agricultural development as well as the thriving of their agricultural enterprises. Poultry production especially, the broilers have been on a decrease over the years. This is evident in the increasing demand and short supply of poultry and poultry products, a ready source of protein. The increase in demand does not match with the production and supply.

However, commercial poultry production of birds and the poultry products though profitable has its own challenges. Like any investment, an appreciable degree of knowledge is essential for success. The researcher observed that average daily intake of poultry protein in Akwa Ibom State and Nigeria in general falls below the recommended intake. This is below the World Health Organization's (WHO) recommended minimum intake of between 43 and 65 grammes, per person per day. The reason for the shortfall in consumption of protein is partly due to high cost of meat and meat products as a ready source of protein in the state as a result of short supply. And when available, the price is out of the reach of the poor. Why Akwa Ibom State is in this

situation is that most broiler farmers are running the business without the necessary requisite skills that can help them to run the business successfully. This is particularly shown by the number of abandoned poultry houses around the state. Due to poor management skills, birds die frequently making them to abandon the business.

Some levels of training have been given by the Akwa Ibom Agricultural Development programme to broiler farmers over the years on how to establish and run a poultry business successfully. The researcher observed that abandonment of poultry business may have been as a result of poor funding, lack of incentives or inadequate skills to manage the poultry business effectively. Thus, the study sought to assess the entrepreneurial skills required in poultry (broiler) production for food security in Akwa Ibom State.

Research Questions

The following research questions were postulated and answered in the study.

1. What are the housing construction skills requirements for broiler production in Akwa Ibom State?
2. What are the skills requirements in stocking for broiler production in Akwa Ibom State?
3. What are the skills requirements in feeds management practices for broiler production in Akwa Ibom State?
4. What are the drug administration skills requirements for broiler production in Akwa Ibom State?

Hypotheses

1. There is no significant difference in the means response of male and female broiler farmers on housing construction skills for food security.

2. There is no significant difference in the means response of male and female broiler farmers on stocking skills requirements for food security.
3. There is no significant difference in the means response of male and female broiler farmers on feed management practices skills requirement for food security.
4. There is no significant difference in the means response of male and female broiler farmers on drug administration skills requirements for food security.

Research Methodology

The study adopted the descriptive survey research design. The basis for choosing this method was contingent upon the fact that survey research enables the collection of detail and factual information which describes existing phenomena. The study population comprised of 386 broiler farmers in Uyo agricultural zone of Akwa Ibom Agricultural Development Programme (AKADEP, 2021). Cluster sampling method was used to select 192 males and 102 female broiler farmers from the chosen agricultural zone (Uyo) for the study. The instrument used for data collection were a 28 – item questionnaire titled Broilers Production Skills Requirement Questionnaire (BPSRQ). A four point scale of Strongly Agree = 4, Agree = 3, Disagree = 2, and Strongly Disagree = 1 was used to assess the opinion of broiler farmers. The questionnaire was divided into sub-sections based on the purpose and research questions. Section 1 elicited information on housing construction skills requirements. Section 2 sought for information on stocking skills requirements. Section 3 elicited information on feed management practices and section 4 sought for information on drug administration skills requirements. To ensure the content and face validity, the research instrument was reviewed several times by three experts, two from the department of Agricultural Education, University of Uyo, Uyo and one from Test and Measurement Unit, Department of Educational Foundation, Guidance and Counselling,

University of Uyo, Uyo. The instrument was tested to establish the reliability using twenty broilers farmers who were not used in the main study. The Cronbach Alpha approach was used to establish the reliability coefficient of the instrument. Broilers production Skills Requirements Questionnaire (BPSRO) was found to be 0.71. Data collected were analyzed using mean to answer the research questions and t-test to test the null hypotheses at 0.05 level of significance ($P < 0.05$).

Results

Research Question 1

What are housing construction skills requirements for broiler production in Akwa Ibom State?

Table 1: Responses on the Housing Construction Skills Requirements

S/N	Housing Construction Skills	x	SD	Remark
1	Ability to identify suitable location for poultry house	2.75	0.97	Agree
2	Ability to select appropriate materials for pen construction	3.10	0.95	Agree
3	Ability to determine the appropriate housing system based on the prevailing condition	2.95	0.96	Agree
4	Ability to adjust ventilation facility in poultry house	2.80	0.95	Agree
5	Ability to determine the required pen width	3.14	0.95	Agree
6	Ability to determine the recommended roof pattern for poultry house	1.93	1.02	Disagree
7	Ability to demarcate house according to age of birds	2.77	6.77	Agree
	Grand mean	19.44	6.77	

* = Agree at .50 cut-off point and above.

Table 1 reveals that broiler farmers agreed to six housing construction skills identified except one. The result indicated that farmers acquired six of the skills except that they are not using the roofing pattern recommended. The result also shows that Battery case system, free range, fold unit and adjustable ventilation were not practiced. This may be as a result of lack of knowledge,

or idea of the benefit of this roofing and housing system in reducing heat stress to helping to achieve higher productivity.

Research Question 2

What are the skills requirements in stocking for broiler production in Akwa Ibom State?

Table 2: Responses on the stocking skills requirements

S/N	Stocking skills requirements	x	SD	Remark
8	Ability to select birds on arrival for brooding	2.48	0.90	Disagree
9	Ability to determine floor space needed for 1-14 days old birds	2.30	0.91	Disagree
10	Ability to determine floor space needed for 6-8 weeks old birds	2.41	0.88	Disagree
11	Ability to identify signs of overcrowding	2.72	0.88	Agree
12	Ability to provide adequate heat	2.50	0.89	Agree
13	Ability to select bedding materials	2.77	0.88	Agree
14	Ability to maintain high standard of sanitation	2.62	0.89	Agree
	Grand mean	17.8	6.23	

* = Agree at 2.50 cut-off point and above.

The data in table 2 reveals that items 8,9 and 10 are not significant. It shows cut off point of less than 2.50. This implied that broiler farmers are not very conversant with these skills, items 11,12, 13 and 14 were significant with the main scores of 2.50 and above on a four point scale.

Research Question 3

What are the skills requirements in feed management practices for broiler production in Akwa Ibom State?

Table 3: Responses on feed management practices

S/N	Feeds Management skills requirements	x	SD	Remark
15	Ability to formulate the balance ration	2.44	0.93	Disagree
16	Ability to determine the number of feed trough/drinkers required	2.59	0.92	Agree
17	Ability to supply water ad libitum	2.96	0.90	Agree
18	Ability to select feeds for birds	2.67	0.91	Agree
19	Ability to detect contaminated water	2.81	0.90	Agree
20	Ability to introduce new feed	2.81	0.90	Agree
21	Ability to control feed wastage	2.31	0.87	Disagree
	Grand mean	18.29	6.33	

* = Agree at 2.50 cut-off point and above.

The data in table 3 reveals that items 15 and 21 had a mean score below 2.50 on a four point scale. This shows that broiler farmers are not able to formulate balanced ration for the birds and are unable to control feed wastages. The items 16, 17, 18, 19, 20 had a mean score of 2.50 and above. This also reveals that broiler farmers acquired these skills in broiler production.

Research Question 4

What are the drug administration skills requirements for broiler production in Akwa Ibom State?

Table 4: Responses on drugs administrations skills requirements

S/N	Drugs administration skills	x	SD	Remark
22	Ability to disinfect poultry house	2.86	0.91	Agree
23	Ability to diagnose disease	2.23	0.95	Disagree
24	Ability to administer first aid treatment to sick birds	2.80	0.91	Agree
25	Ability to select and isolate sick birds	2.69	0.92	Agree

26	Ability to prevent disease/pest outbreak	2.76	0.92	Disagree
27	Ability to de-worm birds	2.33	0.94	Disagree
28	Ability to know when to call in veterinary experts	2.78	0.92	Agree
	Grand mean	18.45	6.47	

* = Agree at 2.50 cut-off point and above.

The data in table 4 reveals that item 2, 24, 25, 26, 28 had mean score above 2.50 which shows that the broiler farmers possessed the skills while items 22 and 28 had mean score of below 2.50 which reveals that broiler farmers do not possess adequate drugs administration skills in broiler production.

Hypothesis 1

There is no significant difference in the mean responses of male and female broiler farmers on housing construction skills for food security.

Table 5: t-test analysis of male and female broiler farmers housing construction skills for food security

Groups	N	X	SD	df	t-cal	t-crit	Decision
Male farmers	192	12.66	4.42	292	14.95	1.97	*
Female farmers	102	6.78	2.72				

* = significant at $P < 0.05$ alpha level

Table 5 shows that the calculated t-value of 14.95 is greater than the critical t-value of 1.97 at 0.05 level of significance. Therefore, the null hypothesis that there is no significance difference in the mean responses of male and female broiler farmers housing construction skills for food security is rejected. There is significance difference existing between broiler farmers' skills in housing construction for food security. This means that adequate knowledge and skills in broiler housing can increase the productivity of the birds and meat quality.

Hypothesis 2

There is no significance difference in the means responses of male and female broiler farmers on stocking skills requirements for food security.

Table 6: t-test analysis of stocking skills requirements of male and female broiler farmers for food security

Groups	N	X	SD	df	t-cal	t-crit	Decision
Male farmers	192	11.64	3.95	292	15.22	1.97	*
Female farmers	102	6.16	2.28				

* = significant at $P < 0.05$ alpha level

Table 6 indicates that the calculated t-value of 15.22 is greater than the critical t-value of 1.97, therefore hypothesis 2 is rejected. This reveals that there is no significant difference in the mean responses of male and female broiler farmers on stocking skills requirements for food security.

Hypotheses 3

There is no significant difference in the means responses of male and female broiler farmers on feed management practices skills requirement for food security.

Table 7: t-test analysis of feed management practices skills requirements of male and female broiler farmers for food security

Groups	N	X	SD	df	t-cal	t-crit	Decision
Male farmers	192	11.89	4.11	292	5.72	1.97	*
Female farmers	102	6.40	2.22				

* = significant at $P < 0.05$ alpha level

Table 7 shows that the calculated t-value of 5.72 was greater than the critical value of 1.97 at 292 degree of freedom. Therefore, null hypothesis 3 is rejected. This implies that there is significant

difference in the mean response of male and female broiler farmers on feed management practices skills requirements for food security.

Hypothesis 4

There is no significant difference in the mean responses of male and female broiler farmers on drug administration skills requirements for food security.

Table 8: t-test analysis of drugs administration skills requirements of male and female broiler farmers for food security

Groups	N	X	SD	df	t-cal	t-crit	Decision
Male farmers	192	11.99	4.21	292	14.55	1.97	*
Female farmers	102	6.46	2.26				

* = significant at $P < 0.05$ alpha level

Data presented in table 8 indicates that the calculated t-value of 14.55 is greater than the critical t-value of 1.97 at 292 degree of freedom. Therefore null hypothesis 4 is rejected. This implies that there is significant difference in the means responses of male and female broiler farmers' on drug administration skills requirements for food security.

Discussion of Findings

The results as shown in table 1 indicate housing construction skills requirement of male and female broiler farmers. As shown in table 5 also that there is significant different in the mean responses of broiler farmers housing construction skills for food security. This study agrees with the study of Yusuf and Malomo (2007) who reported that housing location contributed to the performance of poultry enterprise. Yusuf and Malomo observed that housing location would

prevent direct sunrays into the pen as this could affect production. Orok (2012) also asserted that housing location is an important factor in poultry business.

Also the results shown in table 2 indicated that stocking skills requirements are not fully grasp by the broiler farmers. This may be as a result of inadequate training in relation to stocking requirement by the extension service providers to the farmers. This was further supported by table 6, which shows significant difference in the mean responses of male and female broiler farmers on stocking skill requirements for food security. Nsa and Ikot (2013) revealed that the broiler farmers visited do not apply the stocking principles in their poultry business. This has caused a serious problem of effective management. Other researchers like Mirakzadeh et al (2010) observed that proper stocking density guarantees optimum production.

Table 3 and 7 shows the importance of feed management skills in poultry production. Mittila et al (2007) and Orok (2012) are of the opinion that feed management practice skills determine production rate and also determine the market value of broilers.

Table 4 and 8 reveals the importance of drug administration in poultry production. In attaining food security in poultry production, drugs administration skill is very relevant. The high risk of birds to diseases/pests/ outbreak when not attended to is devastating on the farm and the birds. This was supported by Onuka and Olaitan (2007) and Yusuf and Malomo (2007). The researchers opined that adequate knowledge and skills in drugs administration and proper referrals in poultry business is essential for successful poultry enterprise.

Conclusion and Recommendations

Entrepreneurial education has become a globally accepted tool for the achievement of food security. The benefits of skills acquisition is not in doubt. This is because for success to be

achieved in poultry enterprise, there are skills that are required by the broiler farmers. The findings have revealed that housing construction, stocking, feeds management practices and drugs administration are essential in poultry enterprise. Acquisition of these skills by broiler farmers will empower them to be self employed, job creators, employers and labour and this will contribute meaningfully to increase food security in Akwa Ibom State.

In today's society, entrepreneurship education is very important because it is only through it that a meaningful progress can be achieved. The business of poultry production in Akwa Ibom State should be re-assessed and repositioned to facilitate poultry broiler capacity building in terms of skilled manpower. Like any business, an appreciable degree of knowledge is essential for success. The implication is that prospective broiler farmers must undergo training to acquire and update their skills in poultry production enterprise for food security.

Efforts should be intensified on educating broiler farmers on the need for proper management practices in poultry production by government through Agricultural Extension Agents. More researches should be conducted on the areas of feed requirements in order to disseminate same to farmers by research institutes through extension agents. Government should encourage more private sector participation in training of broilers farmers in the state. Broiler farmers should form groups so that they can exchange ideas and experiences for increased productivity.

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