



Commercial Turkey Skills Required by Women for Sustainability of Rural Families in Oyo State

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Abstract

The study was carried out to identify commercial turkey skills required by women for sustainability of rural families in Oyo State, Nigeria. Three research questions and three null hypotheses were developed that guided the study. Descriptive survey research design was adopted for the study. The population for the study consisted of 176 respondents which consists of 113 extension agents and 63 registered poultry breeder in Oyo State. Due to the manageable size of the population, the entire 176 subjects were involved in the study; therefore, there was no sampling. The instrument for data collection for the study was a 49-item structured questionnaire titled: "Turkey Breeding and hatching Skills Questionnaire" (TBHSQ). The instrument was face-validated by three experts while the Cronbach Alpha reliability coefficient was 0.75. All the 176 copies were retrieved and completely filled representing 100% rate of return. The data collected were analysed using mean for answering the research questions while t-test statistics was used for testing the null hypotheses at 0.05 level of significance. Based on data analyzed, the study identified 12 planning skills, 26 breeding and hatching skills and 11 marketing skills that are required by women in commercial turkey breeding and hatching enterprise for sustainability of rural families in Oyo State, Nigeria. There is no significant difference in the mean ratings of the responses of extension agents and registered poultry breeders on commercial turkey breeding and hatching skills required by women in the state. Based on these findings, the study among others recommended that the government of Oyo State should help integrate the identified skills into the programme of skill acquisition centres in the state for training women and other graduates in the state.

Keywords: Breeding, Hatching, Skills, Rural Family, Turkey.

Introduction

The production of meat and eggs from poultry birds such as turkey has continued to grow than that of any other major sources of animal products in developing countries, Nigeria inclusive. This results from the increasing demand for poultry products due to increase in population, urbanization and westernization of diet (Yassin, Gibril, Hassan & Bushara, 2013). Turkey (*Meleagris Gallopava*) is a domesticated bird with dark plumage, bare heads and red wattles which originated from North America (Hullet, Clauser, Greaser, Harper & Kime, 2004). According to Ajetomobi and Adepoju (2010), turkey is reared in Nigeria for their economic and social purposes. The production of eggs and turkey birds



occupies a prime position for improving animal protein consumption of both rural and urban households. For instance, Karki (2005) stated that consumption of turkeys and broilers as white meat is rising worldwide and that a similar trend existed in developing countries. Ogieva (2003) viewed turkey as poultry birds (turkey) kept for the purpose of meat and egg production, although the manure can equally be used for maintenance of soil fertility to boost crop production under good management systems. Nutritionally, turkeys have tremendous versatility in local marketing and can be sold or traded in small units at any age when large enough to be butchered.

Turkey meat can be cooked whole or sliced or grounded and can be roasted, barbecued, fried or boiled or smoked. Moreover, turkey meat can be made in soup, sausages and other preparations (Yassin, et al, 2013). Apart from the nutritional importance of turkey product, the social significance cannot be underestimated as Sonaiza, Branckaert and Gueiye (2007) stated that turkey plays a significant role in the socio-cultural life of some communities in many countries of the world, as gifts to visitors and relatives; as gift to newly married maidens and as presents during festivals like Christmas and thanksgiving. In addition, the consumption of turkey products is not forbidden by any religious faith. According to Udechukwu (2005), turkey is reared under intensive system of management on a large scale for commercial purposes and extensive or semi-intensive system for both eggs and meat production. Yassin, et al (2013) noted that the cost of production of turkey is relatively cheap as almost 50% of the feed they eat is green vegetables, field grasses and commercial feeds as a supplement. Activities in turkey production are in different stages which include breeding, hatching of eggs, raising layers, brooding, raising turkey broilers to market weight and marketing of turkey products. Contextually, this study is limited to breeding and hatching of turkey eggs as a viable enterprise.

Breeding, according to Kurt (2004) is the mating of animals of the same species for the purpose of combining or transferring desirable qualities found to be present in two different animals. In the view of Broisenko (2010), breeding is the science of mating farm animals to improve their hereditary characteristics and to develop new breeds that are highly productive. In poultry, breeding precedes hatching of eggs. Hatching is the breaking out of the incubated egg for the poults to emerge (Sadek, 2001). The success of hatching practices in the view of Obori (2005) start with quality of eggs through the breeding stock. In commercial turkey farm set up, the success of breeding and hatching activities depend on the equipment and availability of skilled labour.

Skill involves the mastery of practical expertise and knowledge in any occupation (Umunadi, 2014). In the view of Dole (2009), skills are basic cognitive abilities and personal qualities which a worker need to possess in order to succeed in career jobs. Onuka (2003) observed that a person who works productively is skilled because he has acquired the habit of performing a task in all acceptable manners within his/her job. In affirmation, Okorie (2000) noted that skills enable people to effectively perform tasks required by their occupation and other activities of daily life. The acquisition of skills according to Uzoka and Bayode (2010) is done through teaching, training, retraining, practical experience and on the job training. In the context of this study, skill represents practical expertise in turkey breeding and hatching which can be acquired by women to make a living.



Women are very significant in the growth and development of any society. According to Supprakit (2014), women contribute significantly to economic life of Nigerian society. For instance, Central Bank of Nigeria (2010) estimated that women in Nigeria are responsible for at least 70% of food production and processing and are greatly involved in marketing and distributive activities. Women's participation in the labour force has increased greatly since the turn of the 20th century (Ajayi, 2013) and the percentage of women engaged in the paid labour force to support their family has increased rapidly (Onyeonoru, 2005). Hence, it is imperative to state that women both in rural and urban communities contribute greatly to raising the standard of living of their families.

Family represent the smallest functional unit of any society. According to Web Finance (2015), family is a social unit of two or more persons related by blood, marriage, or adoption and having a shared commitment to the mutual relationship. In the opinion of Anyakoha and Eluwa (2010), family is a group of persons united by ties of marriage or blood (ancestry) and having one or more children of their own or adopted and often times characterized by common residence and economic cooperation. Oyerinde (2001) viewed family as any group of people that are related by blood or marriage especially a group of two grown-up people and their children.

The financial status of most Nigerian families is in deplorable condition as most rural families find it difficult to provide three square meals for their members due to high level of poverty. The case of rural families in Oyo state is not different as the women in the state are not economically empowered to bail their families out of the present rising level of poverty across the country. It is imperative to note state that, any effort to equip the women in any productive activities will help a great deal in sustaining their families. Sustainability is broadly described as meeting the needs of the present generation without compromising the ability of future generations to meet their own needs (Clough, Chameau and Carmichael, 2006). Sustainability is ability or capacity of something to be maintained. Hence, the quest to ensure that rural families in Oyo state are sustained in this period of hardship, this study is instigated to identify commercial turkey skills required by women for sustainability of rural families in oyo state.

Purpose of the Study

The purpose of the study was to identify commercial turkey skills required by women for sustainability of rural families in Oyo State. Specifically, the study identified:

1. Planning skills in establishing turkey enterprise by women for sustainability of rural families.
2. breeding and hatching skills in establishing turkey enterprise by women for sustainability of rural families.
3. marketing skills in establishing turkey enterprise by women for sustainability of rural families.

Research Questions

Based on the specific purposes, the study answered the following research questions:



1. What are the planning skills in establishing turkey enterprise by women for sustainability of rural families?
2. What are the breeding and hatching skills in establishing turkey enterprise by women for sustainability of rural families?
3. What are the marketing skills in establishing turkey enterprise by women for sustainability of rural families?

Null Hypotheses

1. There is no significant difference in the mean ratings of registered poultry breeders and extension agents on the planning skills in establishing turkey enterprise by women for sustainability of rural families.
2. There is no significant difference in the mean ratings of registered poultry breeders and extension agents on the breeding and hatching skills in establishing turkey enterprise by women for sustainability of rural families.
3. There is no significant difference in the mean ratings of registered poultry breeders and extension agents on the marketing skills in establishing turkey enterprise by women for sustainability of rural families.

Methodology

Descriptive survey research design was adopted for the study. Descriptive survey research design in the opinion of Owens (2002) is that in which the same information is gathered from an unbiased representative group of interest using questionnaire, interview and observation. Descriptive survey design was found suitable for this study because questionnaire was used to collect data from respondents on turkey rearing skills required by women using the opinions of registered poultry breeders and extension agents. The population for the study consisted of 176 women consisting 113 extension agents across the state and 63 registered poultry breeder in Oyo State. Due to the manageable size of the population, the entire 176 subjects were involved in the study, therefore, there was no sampling. The instrument for data collection for the study was a 49-item structured questionnaire titled: "Turkey Breeding and hatching Skills Questionnaire" (TBHSQ). The questionnaire was structured on a 4-point rating scale of Highly Required (HR); Averagely Required (AR); Less Required (LR) and Not Required (NR) with corresponding values of 4, 3, 2, and 1 respectively. The instrument was face-validated by three experts. For the purpose of ascertaining the internal consistency of the instrument, Cronbach Alpha reliability method was used. The reliability coefficient obtained was 0.75. Five research assistants joined the researcher in data collection from the respondents across the state. All 176 copies of the questionnaire administered to the respondents, were retrieved and completely filled representing 100% rate of return. The data collected were analysed using mean for answering the research questions while t-test statistics was used for testing the null hypotheses at 0.05 level of significance.

In taking decision on the research questions, cut-off point value of 2.50 on 4-point rating scale was used to interpret the results as agreed or disagreed. In that case, turkey rearing skill items with mean values of 2.50 and above were regarded as "Agreed" and otherwise as "Disagreed". On the hypotheses tested, the null hypothesis of no significant difference was accepted for items whose p-values were greater than 0.05 level of significance



while hypothesis of no significant difference was rejected for items whose p-values were less than 0.05 level of significance.

Results

The results for this study were obtained based on the research questions answered and hypotheses tested. The results from research questions and hypotheses are presented in Tables 1, 2 and 3 below.

Research Question 1: What are planning skills required by women in establishing turkey enterprise for sustainability of rural families?

H0₁: There is no significant difference in the mean ratings of registered poultry breeders and extension agents on the planning skills required by women in establishing turkey enterprise for sustainability of rural families.

The data for answering research question one and testing hypothesis one are presented in table 1 below:

1: Mean Ratings of Registered Poultry Breeders and Extension Agents on Planning Skills Required by Women in Establishing Turkey Enterprise for Sustainability of Rural Families. (N = 176)

SN	Item Statements	\bar{X}_{Brd}	\bar{X}_{Ext}	\bar{X}_G	SD	p-value	Remarks RQ H0
1	Formulate the objectives for breeding and hatching for selling of day old chicks.	3.46	3.13	3.29	0.56	0.00	Rqd S*
2	Review the objectives periodically based on changes in market demand for turkey chicks.	3.50	3.51	3.50	0.44	0.86	Rqd NS
3	Make plans for the selection of the farm site from of threats and thieves.	3.28	3.24	3.26	0.61	0.68	Rqd NS
4	Construct good and suitable pens for easy movement of birds and humans	3.55	3.46	3.50	0.54	0.57	Rqd NS
5	Specify the production system to adopt and produce the plan	3.58	3.46	3.52	0.63	0.15	Rqd NS
6	Identify appropriate equipment for breeding and hatching of turkey.	3.55	3.52	3.53	0.56	0.81	Rqd NS
7	Make proper arrangement for vaccines for the turkey birds	3.37	3.40	3.38	0.50	0.68	Rqd NS
8	Identify sources of credit for breeding and hatching of turkey	3.56	3.54	3.55	0.60	0.62	Rqd NS
9	Identify the required personnel needed for breeding and hatching of turkey eggs.	3.40	3.03	3.21	0.71	0.01	Rqd S*
10	Identify customers or market for young poults.	3.47	3.56	3.51	0.69	0.56	Rqd NS
11	Budget for the identified activities of	3.54	3.49	3.51	0.66	0.62	Rqd NS



SN	Skills in Turkey Breeding	\bar{X}_{Brd}	\bar{X}_{Ext}	\bar{X}_G	SD	value	RQ	H0
1	Identify source of birds for breeding	3.66	3.54	3.60	0.56	0.67	Rqd	NS
2	Select breeding stock based on proven characteristics or traits	3.59	3.57	3.58	0.60	0.55	Rqd	NS
3	Provide suitable environment for breeding and hatching of turkey eggs.	3.35	3.70	3.52	0.71	0.01	Rqd	S*
4	Select mating method to use	3.33	3.40	3.36	0.45	0.34	Rqd	NS
5	Provide laying nest for the turkey hen.	3.51	3.53	3.52	0.62	0.22	Rqd	NS
6	Care for the birds through laying and collect the eggs.	3.38	3.32	3.35	0.63	0.58	Rqd	NS
7	Clear and disinfect the incubator	3.45	3.34	3.39	0.66	0.13	Rqd	NS
8	Identify good fertile eggs for incubation through candling	3.46	3.48	3.47	0.58	0.46	Rqd	NS
9	Arrange the selected eggs in the hatching trays with the larger end up.	3.41	3.44	3.42	0.54	0.64	Rqd	NS
10	Set hatching tray with eggs into the incubation chambers.	3.44	3.43	3.43	0.43	0.32	Rqd	NS
11	Regulate the temperature	3.45	3.54	3.49	0.64	0.45	Rqd	NS
12	Regulate the hygrometer for required relative humidity which is 60 ⁰	3.41	3.75	3.58	0.74	0.03	Rqd	S*
13	Set the alarm of the machine for alert in case of any deviation and the end of incubation	3.43	3.46	3.44	0.60	0.21	Rqd	NS
14	Regulate the incubator for required oxygen which is 21%	3.34	3.71	3.52	0.64	0.02	Rqd	S*
15	Candle the eggs for fertilization	3.40	3.41	3.40	0.61	0.63	Rqd	NS
16	Check the eggs for hatching	3.54	3.52	3.53	0.54	0.23	Rqd	NS
Skills in Hatching Turkey Eggs								
17	Install incubators in the hatchery room.	3.28	3.30	3.29	0.54	0.45	Rqd	NS
18	Procure and store fertile eggs in the egg room for incubation.	3.61	3.55	3.58	0.54	0.34	Rqd	NS
19	Ensure appropriate temperature, ventilation and humidity in storage & hatchery room.	3.16	3.46	3.31	0.73	0.01	Rqd	S*
20	Select fertile eggs for incubation.	3.23	3.68	3.45	0.62	0.02	Rqd	S*
21	Arrange the selected eggs in the hatchery tray.	3.49	3.51	3.50	0.56	0.63	Rqd	NS
22	Candle the eggs to ensure hatchability.	3.53	3.50	3.51	0.54	0.43	Rqd	NS
23	Turn the incubating eggs several times per day.	3.56	3.61	3.58	0.34	0.34	Rqd	NS



24	Regulate incubating oxygen, relative humidity and temperature.	3.33	3.75	3.54	0.66	0.04	Rqd	S*
25	Transfer fertile eggs from hatchery tray to hatchers.	3.46	3.44	3.45	0.62	0.54	Rqd	NS
26	Remove and discard infertile eggs from the incubator.	3.50	3.48	3.49	0.51	0.43	Rqd	NS

Key: \bar{X}_{Brd} = Mean of Breeders; \bar{X}_{Ext} = Mean of Extension Agents; \bar{X}_G = Overall Grand Mean;

Rqd = Required; **N**= No of Respondents; Level of Sig. = 0.05; **S*** = Significant; **NS** = Not Significant.

The data presented on Table 2 above showed that the grand mean ratings of the responses of the respondents on the 26 items in the table ranged from 3.29 to 3.60 which were all greater than the cut-off point value of 2.50 on a 4-point rating scale. This finding indicates that all the 26 identified items in the table are breeding and hatching skills required by women for managing turkey breeding and hatchery enterprise to sustain their families in Oyo State.

The data presented on Table 2 on hypothesis two showed that the p-values of 20 out of the 26 items in the table ranged from 0.13 to 0.67 which were greater than 0.05 level of significance. This indicated that there are no significant differences in the mean ratings of the responses of registered poultry breeders and extension agents on the 20 identified poultry breeding and hatching items. Therefore, the hypothesis of no significant difference in the mean ratings of the responses of the two groups of respondents is accepted on the 20 items. The p-values on the remaining 6 items on the table, specifically items 3, 12, 14, 19, 20 and 24 are 0.01, 0.03, 0.02, 0.01, 0.02 and 0.04 respectively which are less than 0.05 level of significance. This finding indicated that there are significant differences in the mean ratings of the responses of registered poultry breeders and extension agents on the 6 remaining items of turkey breeding and hatching. Therefore, the hypothesis of no significant difference in the mean ratings of the responses of the two groups of respondents is rejected on the remaining six items in the table.

Research Question 3: What are the marketing skills in establishing turkey enterprise by women for sustainability of rural families?

H0₃: There is no significant difference in the mean ratings of registered poultry breeders and extension agents on the marketing skills in establishing turkey enterprise by women for sustainability of rural families.

The data for answering research question three and testing hypothesis three are presented in table 3 below:

Table 3: Mean Ratings of Poultry Breeders and Extension Agents on Marketing Skills Required Women for Sustainability of Rural Families. (N = 176)

SN	Item Statements	\bar{X}_{Brd}	\bar{X}_{Ext}	\bar{X}_G	SD	p-val.	Remarks
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							RQ	H0	
1	Identify markets where day old poult of turkey can be sold	3.43	3.51	3.47	0.56	0.20	Rqd	NS	
2	Carryout market survey for day old poult.	3.43	3.41	3.42	0.45	0.67	Rqd	NS	
3	Advertise poult for sale through media or personal contact	3.54	3.52	3.53	0.44	0.86	Rqd	NS	
4	Package the day old chicks in the perforated cartons for easy transportation	3.54	3.52	3.53	0.66	0.62	Rqd	NS	
5	Identify distribution channel and buyers.	3.48	3.55	3.51	0.63	0.35	Rqd	NS	
6	Select young poult for sale	3.63	3.55	3.59	0.56	0.81	Rqd	NS	
7	Weight poult according to age and sex	3.36	3.44	3.40	0.60	0.62	Rqd	NS	
8	Fix prices for poult according to grading	3.46	3.43	3.44	0.71	0.30	Rqd	NS	
9	Supply young poult to distributors	3.57	3.50	3.53	0.69	0.56	Rqd	NS	
10	Take proper record of sales to determine profit or less	3.54	3.51	3.52	0.61	0.68	Rqd	NS	
11	Make plans for extension of market coverage	3.60	3.56	3.58	0.54	0.57	Rqd	NS	

Key: \bar{X}_{Brd} = Mean of Breeders; \bar{X}_{Ext} = Mean of Extension Agents; \bar{X}_G = Overall Grand Mean; **Rqd** = **Required**; N= No of Respondents; Level of Sig. = 0.05; **NS** = Not Significant.

The data presented on Table 3 above revealed that the grand mean ratings of the responses of the respondents on the 11 items in the table ranged from 3.40 to 3.59 which were all greater than the cut-off point value of 2.50 on a 4-point rating scale. This finding shows that all the 11 identified items in the table are skills required by women for marketing their turkey products to sustain their families in Oyo State.

The data presented on Table 3 on hypothesis three revealed that the p-values of the 11 items in the table ranged from 0.20 to 0.86 which were greater than 0.05 level of significance. This indicated that there are no significant differences in the mean ratings of the responses of registered poultry breeders and extension agents on the 11 identified skill items in marketing turkey products. Therefore, the hypothesis of no significant difference in the mean ratings of the responses of the two groups of respondents is accepted on the 11 marketing items in the table.

Discussion of Findings

Planning skills required by women in Oyo State required for managing turkey enterprise include: formulating the objectives for breeding and hatching, for selling of day old chicks, reviewing the objectives periodically based on changes in market demand for turkey chicks, making plans for the selection of the farm site from of threats and thieves,



specifying the production system to adopt and produce the plan, identifying appropriate equipment for breeding and hatching of turkey, making proper arrangement for vaccines for the turkey birds and identifying sources of credit for breeding and hatching of turkey. The finding of this study conformed with that of Ezedum, Agbo and Odigbo (2011) who reported that the steps involved in planning for an enterprise include: prepare production plan; prepare financial plan and prepare marketing plan among others. The findings of study also corroborated Petritz (2000) who identified the steps involved planning for farm business as formulating the objectives for brooding of poults to growers enterprise; specify the brooding system to adopt and produce the plan. This planning is necessary for profitable turkey production because if there is no adequate plan, the business will fail.

Turkey breeding skills required by women include: identify source of birds for breeding, select breeding stock based on proven characteristics or traits, provide laying nest for the turkey hen, care for the birds through laying and collect the eggs, clear and disinfect the incubator among others. Hatchery skills required by women in managing turkey farm enterprise include: installation of incubators in the hatchery room, procuring and store fertile eggs in the egg room for incubation, selecting fertile eggs for incubation, arranging the selected eggs in the hatchery tray and candle the eggs to ensure hatchability. The findings of the study on breeding agreed with Flanders (2004) who identified the activities involved in breeding to include: identify stocking capacity ratio of poultry female/male, provide suitable environment for breeding and hatching of turkey eggs among others. Uwadi (2006) identified hatchery skills to include: installation of incubators in the hatchery room, provide correct temperature, set hatchery tray with eggs into incubator chambers, remove infertile eggs from the incubator, assist weal chicks to come out of the egg shell, inoculate the chicks, provide brooder house and vaccinate chicks in the hatchery house.

This study found that skills required by women in marketing turkey products include: identify markets where day old child of turkey can be sold, carryout market survey for day old poults, advertise poults for sale through media or personal contact, package the day old chicks in the perforated cartons for easy transportation, identify distribution channel and buyers, select young poults for sale and weight poults according to age and sex. The findings of the study supported that of Rajagopal (2007) who identified marketing skills to include: carrying out market survey and identify distribution channel to consumers among others. In addition, the findings of this study also corroborated that of Uwadi (2006) who identified skills in marketing poultry products to include; advertise products to prospective buyers, keeping of accurate record, keeping of the products, fix appropriate prices based on products cost, notify customers on arrival of products in the markets, collect and collate market information, count and grade eggs laid. Proper, knowledge of marketing information and adequate communication is prerequisite for success in turkey production to prevent business failure.

Conclusion

This study was carried out to identify commercial turkey breeding and hatching skills required by women for sustainability of rural families in Oyo State. This was born out of the need to reduce the present high level of poverty among rural women as their poor economic status affects their families in the state. It was found out that the women required 12 planning skills, 26 breeding and hatching skills and 11 marketing skills for engaging in commercial



turkey enterprise for sustainability of rural families in Oyo State. This study therefore concluded that, the adoption of the identified skills in commercial turkey enterprise by skill acquisition centres for training women in the state will help to reverse their present level of poverty and improve the livelihood of their families in the state.

Recommendations

1. The government of Oyo State should help integrate the identified skills into the programme of skill acquisition centres in the state for training women and graduates in the state.
2. Also, the turkey farmers in the state should be subjected to short training on modern and commercialised turkey production for improved livelihood.
3. The government of Oyo State can also help poultry producers by subsidising inputs so as to increase women participation in turkey production to alleviate poverty in their families.

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