

## **Regulation of Nigerian Poultry Industry: Formation of Poultry Breeders' Association of Nigeria**

**Bolatito<sup>a,b,c\*</sup>, O. A., Ilori<sup>a,d</sup>, B. M., Oladipupo<sup>b</sup>, C. O. and Okere<sup>b</sup>, A. U. and Adebambo<sup>a,d</sup>, A. O.**

<sup>a</sup>*Centre of Excellence in Agricultural Development and Sustainable Environment, Federal University of Agriculture, Abeokuta, Ogun State, Nigeria.*

<sup>b</sup>*National Centre for Genetic Resources and Biotechnology, Moor Plantation, Ibadan. Oyo State, Nigeria.*

<sup>c</sup>*College of Animal Health and Production Technology, Moor Plantation, Ibadan. Oyo State.*

<sup>d</sup>*Department of Animal Breeding and Genetics, COLANIM, Federal University of Agriculture, Abeokuta, Ogun State, Nigeria.*

**Corresponding Author:** [rontitodg@yahoo.com](mailto:rontitodg@yahoo.com) **Phone Number:** +2348034671972

**Target Audience:** Policy makers, Poultry Breeders, Researchers and Scientists.

### **Abstract**

*There are lots of crossbreeding activities going on in poultry industry with less development of new breeds in Nigeria. Data were obtained through individual interview on breeding operations being carried out by some members of the day-old chicks (DOC) Merchants Association of Nigeria and Chicken promoters in Nigeria. Eleven major and other subsidiary chicken producers in the country were also interviewed on their stocks' pedigrees and operations. The data collected were subjected to descriptive statistical analysis of simple percentages and proportions. The respondents' highest educational qualification are Higher National Diploma and First Degree representing 36.36 % male and 38.33 % female, respectively. A total of 303 respondents representing 75.75 % were identified to engage in livestock farming with different chicken breeding operations. Respondents engaged more in the production of fertile eggs/day-old chicks. Crossbreeding operations were been carried out by the respondents (53.80 % and 43.04 %) but no new chicken breed was developed. None of the chicken companies responded to the survey. Establishment of breeders' association where the members can be educated and guided on the procedures governing the development and registration of new chicken breeds in Nigeria will be highly beneficial.*

**Keywords:** *Chicken Genetic Resources, breeding activities, Breeders' Association, Newly-developed chicken breed, Livestock Regulation.*

### **Description of Problem**

The aim of animal breeding activities is to improve the genetic quality of livestock and this can be achieved by utilizing standardized breeding methods through selection, evaluation and recording of such breeds or strains with the appropriate regulating body. A large percentage of exotic chicken breeds in Nigeria are layers and they provide majority of commercial eggs while the rest are broilers (1; 2). The Universities, Colleges, Research Institutes and some

private farmers are involved in systematic breeding while the traditional livestock farmers may be involved in straight and unstructured breeding systems (3).

In spite of the various problems such as escalation of feed prices, avian influenza and inadequate credit facilities facing the Nigerian poultry sector, the sector is still expanding. This has however culminated in increase of backyard and small-scale producers, particularly in urban and peri-urban zones, thereby increasing the

concentration of poultry production in these areas (1). (4) ascribed lack of professional animal breeders and high level of illiteracy among the livestock keepers who are not trained in the art of breeding to the presence of many non-descript breeds in the market. Some of the needs required by commercial farmers to increase the efficiency in chicken production has been highlighted (5). The prevailing practice around the world is that animals are frequently bred according to the pre-determined breeds' standard set down by the governing Organizations and which is also obtainable in Nigeria (6).

Livestock breeds' registries fundamentally promote, preserve and define breeds standard and pedigrees recording. In the regulation governing the breeding, registration and commercial utilization of livestock breeds in Nigeria, Act of Parliament (7; 8), livestock breeders' association is a key stakeholder of the committee which is presently in-active in the country. ShikaBrown® commercial layers (9; 10) and FUNAAB Alpha® dual-purpose chickens (11) remain the chicken breeds developed and registered accordingly with the Nigeria Standard of livestock registration (12; 13). This study investigated various chicken breeding operations being carried out by some members of the day-old chicks (DOC) Merchants Association of Nigeria and Nigerian chicken promoters/companies, chicken stocks' pedigrees, newly-developed strains, if any purposely to populate the National chicken register.

### **Materials and Methods**

A structured questionnaire was designed using modified Poultry descriptor for registration in Nigeria (13) to obtain data on various chicken breeding operations being carried out by some members of the DOC Merchants Association of Nigeria alongside their main merchandise. In the like

manner were the eleven major and subsidiary chicken promoters in the country (14; 15), interviewed on their stocks' pedigrees, operations and possibly the newly-developed strains, if any. The study was conducted at Oluyole, Ibadan; the market hub of day-old chicks in Nigeria. Likewise, the major and subsidiary chicken promoters in the country were surveyed in their various locations in Nigeria. A total of 400 members of DOC Merchants were randomly selected, individually interviewed on the poultry farms' operations and different chicken breeding operations they do. The questionnaire was administered to both male and female members of DOC Merchants. Physical exploration and courier service were explored in the administration of a 12-pages hard copy questionnaire among the chicken promoters/companies in Nigeria. Google form was also deployed to extract information on their stocks' pedigrees, operations and possibly the newly-developed strains. The data obtained were subjected to descriptive statistics (16) to generate tables and percentage distribution.

### **Results and Discussion**

#### **Demographic information of some members of the day-old chicks (DOC) Merchants Association of Nigeria**

The respondents' information is presented in Table 1 and Figure 1. The respondents' age was between 46 – 55 years (40.91 %) and 36 – 45 years (39.44 %) for male and female respectively. The obtained values for the respondents engaged in livestock farming and different chicken breeding operations among members of the DOC Merchants confirmed the report of (17) which stated that 48.40 % male and 51.60 % female of 37 % Nigerian youths were engaged in agriculture. The highest educational qualification of the respondents is Higher National Diploma and First Degree

representing 36.36 % and 36.11 % for male and female respondents respectively. Owing to the high population growth and growing income in Nigeria, the demand for poultry products is increasing (5); thereby the Nigerian youths engaged themselves in the sector and become self-employed. Equally, the year of business establishment were between 6 – 10 years and 0 – 5 years representing 33.64 % and 36.67 % for male and female respondents respectively; majorly the business is privately owned. The proportions of the value obtained among the members of DOC Merchants Association of Nigeria confirmed the report of (17) that

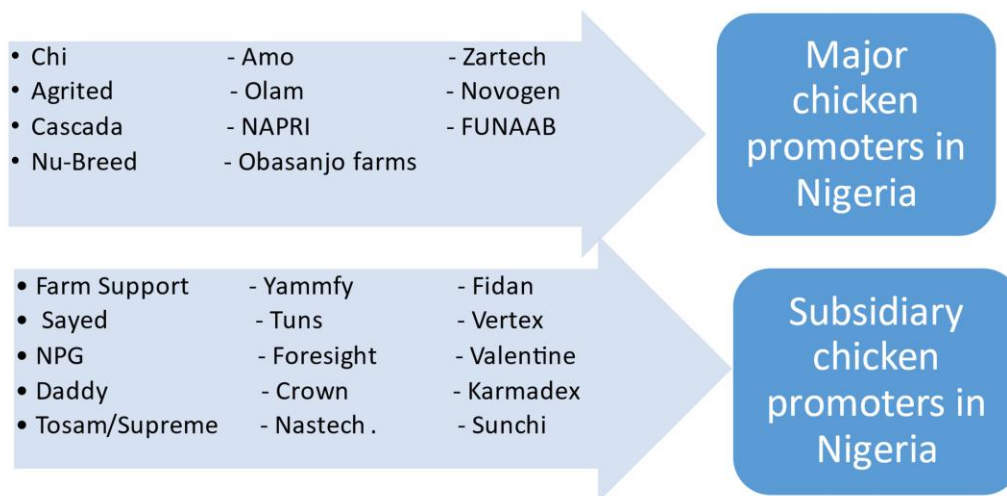
large number of Nigerian youths are involved in agricultural business.

Sadly, neither any of the eleven (11) major chicken promoters including Chi, Amo, Zartech, Agrited, Obasanjo Farm, Olam, Novogen, NAPRI, Cascada, FUNAAB and Nu Breed as identified by (14; 15) nor the subsidiary chicken promoters (Farm Support, Yammfy, Fidan, Sayed, Tuns and Vertex, NPG, Foresight, Valentine, Daddy, Tosam/Supreme, Crown, Karmadex, Nastech, Sunchi etc) in the country responded to the survey. Meanwhile, (18) categorized them as one of the important private-sector players in the poultry industry.

**Table 1. Demographic information of some members of the day-old chicks (DOC) Merchants Association of Nigeria**

Survey Descriptions	Male		Female	
	Total frequency	%	Total frequency	%
Numbers of some members of the day-old chicks (DOC) Merchants assessed 400	220		180	
<b>Age Distribution</b>				
16-25	5	2.27	10	5.56
26-35	37	16.82	25	13.89
36-45	73	33.18	71	39.44
46-55	90	40.91	64	35.60
56-65	15	6.82	10	5.56
>66	-	-	-	-
<b>Educational level</b>				
O'Level	70	31.82	44	24.44
OND/NCE	58	26.36	65	36.11
HND/BSc/B.Agric/B.Tech/B.Eng	80	36.36	56	31.11
MSc/M.Agric/MBA	12	5.45	15	8.33
PhD	-	-	-	-
<b>Year of Business Establishment</b>				
0-5	56	31.82	66	36.67
6-10	74	33.64	39	21.67
11-15	56	31.82	39	21.67
16-20	30	13.64	32	17.78
≥21	04	1.82	04	2.22
<b>Type of Business Establishment</b>				
Private owned	220	55.00	180	45.00
Government owned	-	0.00	-	0.00

### List of major and subsidiary chicken promoters in Nigeria



**Figure 1. List of major and subsidiary chicken promoters in Nigeria**  
**Source: (14; 15).**

#### **Chicken breeding operations by some members of the day-old chicks (DOC) Merchants Association of Nigeria.**

Figures 2 - 3 showed the different chicken breeding operations being carried out and chicken types being reared by some members of the day-old chicks (DOC) Merchants Association of Nigeria. The total percentage of 75.75 respondents, representing 47.90 % male and 52.15 % female respectively were identified to be engaging in livestock farming and carried out different chicken breeding operations and this confirmed (17) report which stated that 48.40 % male and 51.60 % female of 37 % Nigerian youths were engaged in agriculture; which was according to the National Baseline Youth Survey (19) conducted in 2012. (5) highlighted the importance of poultry sector and its contribution to export revenue earnings likewise the employment generation; employing nearly three quarters of Nigeria's

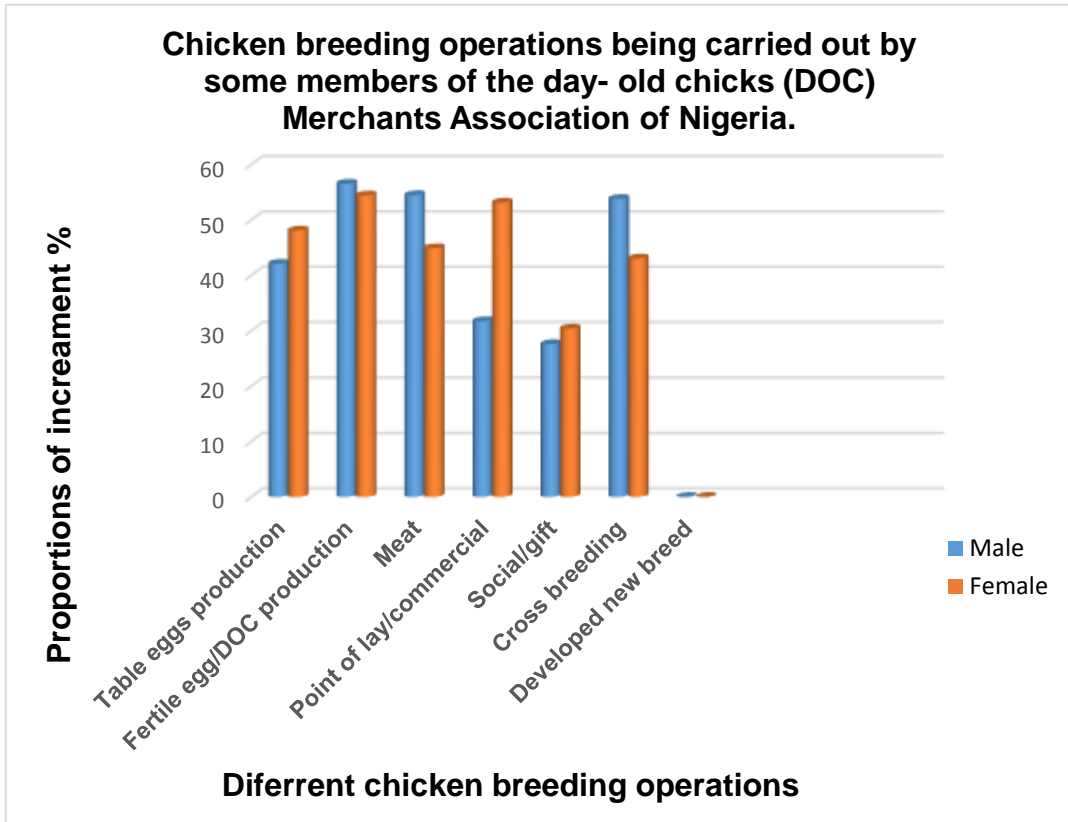
work force.

#### **Production of eggs, day-old chicks and marketing**

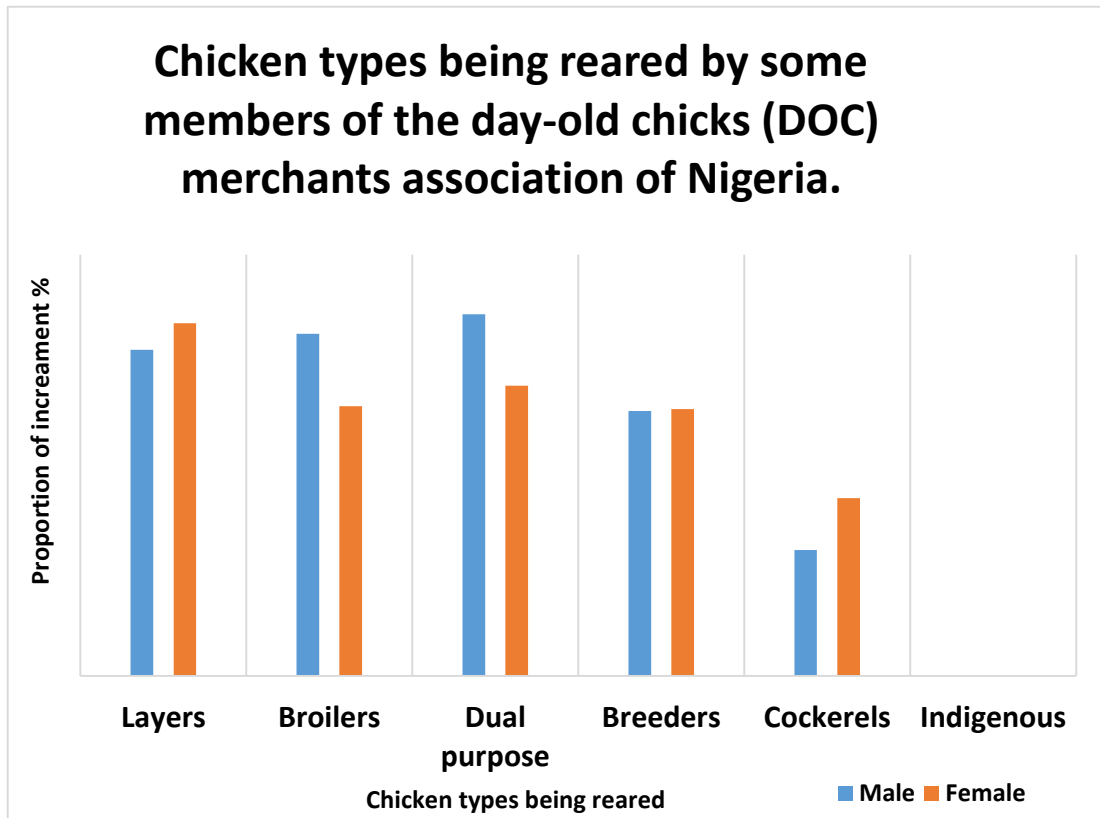
The study revealed the respondents engaged more in the production of fertile eggs/day-old chicks, likewise the commercial table eggs and meat at their respective farms' breeding operations. Obviously, the production of eggs is one of the available, huge potentials and lucrative business in the poultry industry in Nigeria. (20) reported higher gross margin for egg production than the broiler production in his study while (14; 15) reported different and preferred companies' products by the customers and further identified Plain Carton day-old chicks. The study further substantiated the entrepreneurial prowess of the DOC Merchants who are actively involved in the day-old chicks' production, packaging them in plain carton boxes for sales to the prospective customers. Credits

delivery to the Merchants will promote the entrepreneurial ability and will further enhance the development of small and medium enterprises among them (21; 17).

The respondents also utilized the dual-purpose Noiler chickens. (20) ascribed profitability level to a function of production scale and type of poultry enterprise.



**Figures 2. Different chicken breeding operations being carried out by some members of the day-old chicks (DOC) Merchants Association of Nigeria**



**Figures 3. Chicken types being reared by some members of the day-old chicks (DOC) Merchants Association of Nigeria**

**Crossbreeding using Nigeria indigenous chickens (NIC) for commercial production**

The study further revealed that none of the members of DOC Merchants utilize indigenous chickens (IC) in their respective livestock breeding operations at their various farms. (3) recognized market preferences, high demand and general adaptability of livestock products as the future of sustainable use and development of any animal genetic resources. (22) corroborated the study, reporting that developing countries prefer to use high yielding commercial lines developed for intensified management systems for crossbreeding and indigenous chickens for upgrade.

**Crossbreeding, livestock descriptors and Registry**

Crossbreeding is one of the major operations being carried out by some members of the DOC Merchants Association of Nigeria at 53.80 % male and 43.04 % female respondents but no new chicken breed was identified being developed. This report substantiated the need for constituting these identified members of the DOC Merchants and other livestock farmers into a breeders’ association where the members can be educated and guided on the procedures governing the development of new chicken strains in Nigeria. (6) described procedure for registration of livestock breeds in Nigeria

where both the old/existing and new livestock breeds can be registered (12; 13). Also, (3) emphasized on animal breeds registries, that they are not only created for animal genotypes but rather for enhancing proper animal statistical data for the country. American Poultry Association (23; 24) recognized 53 large fowls and Bantam chicken varieties, UK standardized 93 chicken breeds (25; 26) including pure-breds and hybrid chickens; American Bantam Association deals mainly with Bantam chicken breeds (27).

### Conclusion and Applications

Based on the findings from this study, it is established that:

1. There are large number of learned individuals engaging in the poultry business in Nigeria.
2. Crossbreeding activity is constantly being carried out by some members of the DOC Merchants Association of Nigeria and no new chicken breed was developed and fewer respondents utilize indigenous chickens in their livestock breeding operations at their various farms.
3. It will be highly beneficial forming these specialized members of the DOC Merchants and other livestock farmers to a breeders' association where the members can be educated and guided on the procedures governing the development and registration of new chicken breeds in Nigeria.
4. Follow up on the major chicken promoters in the country to register their stocks for proper identification of breeds' pedigree and recording.

### References

1. FAO. (2008). Assessment of the Nigerian poultry market chain to improve biosecurity. Food and

Agriculture Organization of the United Nations. Nigeria Consultative Mission Publication. pp 1-60.

2. Bolatito, O. A., Adeyanju, T. T., Adeleke, G. O. and Akintobi, E. (2021). Chicken breeds utilized for commercial production of day-old chicks and their registration status in Nigeria. *In the Scientific Track Proceedings of the 3<sup>rd</sup> National Summit and Conference on Genetic Resources Conservation and Utilisation* held at Prof. E. A. Adebowale Training Hall, IAR&T, Ibadan, Oyo state, Nigeria. pp 194–199.
3. FAO. (2015). The Second Report on the State of the World's Animal Genetic Resources for Food and Agriculture, edited by B.D. Scherf and D. Pilling. FAO Commission on Genetic Resources for Food and Agriculture Assessments. Rome. pp 604.
4. Adebambo, O. A. (2012). Domestic Animal breeds and breeding in Nigeria's Animal Agriculture. Tolukoya Print House, Abeokuta, Ogun State. Pp. 187-198. ISBN: 978-978-50810-5-3
5. Heinke, H., Alexandra C. and Ludwig T. (2015). The Poultry Market in Nigeria: Market Structures and Potential for Investment in the Market. *International Food and Agribusiness Management Review*, Special Issue A (8): 1-26.
6. Bolatito, O. A. and Aladele, S. E. (2019). Preliminary information on the status of sustainable use, characterization and inventory of animal genetic resources in Nigeria. *Nigerian Journal of Animal Science*, 21(2): 9-17.
7. Amended Act of Parliament. (2016). National Crop Varieties and Livestock Breed (Registration, etc). *Laws of the Federation of Nigeria*. pp 1765–1768.
8. Decree No. 33 of (1987). National Crop Varieties and Livestock Breeds (Registration, etc). *Supplemental to*

- Official Extraordinary*, 65(74): 245–248.
9. NACGRAB, FMST. (2000). The National Register for Chicken: ShikaBrown® commercial layers. National Committee for the Naming, Registration and Release of Crop Varieties and Livestock breeds. National Centre for Genetic Resources and Biotechnology, Federal Ministry of Science and Technology. pp 1-2.
  10. Bolatito, O. A., Ajayi, D. A., Osewa, S. O., Nden, D., Tolase-Fabunmi, A., Adeyanju, T., Hassan, T., Adeleke, G., Popoola, M. A., Raji, M. A., Lamidi, K., Aladele, S. E. and Nwagu, B. I. (2017). Fertility and hatchability potentials of Shikabrown® chickens and effect of body weight and age of chicken on egg quality traits in the Southwest, Nigeria. *Nigerian Journal of Animal Science*, 19(2): 23-32.
  11. NACGRAB, FMST. (2018). The National Register for Chicken: FUNAAB Alpha® dual-purpose chicken. National Committee for the Naming, Registration and Release of Crop Varieties and Livestock breeds. National Centre for Genetic Resources and Biotechnology, Federal Ministry of Science and Technology. pp 3 - 4.
  12. NACGRAB, FMST. (2016). Guidelines for registration and release of new crop varieties in Nigeria. National Centre for Genetic Resources and Biotechnology, Federal Ministry of Science and Technology. pp 23.
  13. NACGRAB, FMST. (2017). The Descriptors formats for Livestock breeds/strains. National Committee on Naming, Registration and Release of Crop Varieties, Livestock/Fisheries. National Centre for Genetic Resources and Biotechnology, Federal Ministry of Science and Technology. 1-46.
  14. Bolatito, O. A., Adebambo, O. A., Ilori, B. M., Folorunso, O., Ajayi, D. A., Hasan, T. and Aladele, S. E. (2022). Utilisation and registration status of chicken genetic resources in Nigeria. *Asian Journal of Research in Animal and Veterinary Sciences*, 9(3): 28-36.
  15. Bolatito, O. A. (2023). Microsatellites diversity, sustainable use and inventory management of Nigerian chicken genetic resources. *Doctor of Philosophy Thesis*, Livestock Science and Sustainable Environment Programme, Centre of Excellence in Agricultural Development and Sustainable Environment, Federal University of Agriculture, Abeokuta, Ogun State. Nigeria, 173pp.
  16. SPSS. 2000. Statistical Package for Social Sciences www.release7.5.1. standard version.
  17. Babu, S., Zhou, Y., Koeber, L. and Srivastava, N. (2020). Youth Entrepreneurship in Agribusiness Nigeria Country Report. *International Food Policy Research Institute and Syngenta Foundation for Sustainable Agriculture Publication*. 1-64.
  18. NABC. Poultry sector study Nigeria. A publication of Ministry of foreign affairs, Netherlands Enterprise Agency. 2019; 1-28.
  19. National Bureau of Statistics. (2012). National Baseline Youth Survey. Nigeria: NBS. [https://www.nigerianstat.gov.ng/pd/fuploads/2102%20National%20Baseline%20Youth%20Survey%20Report\\_1.pdf](https://www.nigerianstat.gov.ng/pd/fuploads/2102%20National%20Baseline%20Youth%20Survey%20Report_1.pdf)
  20. Bamiro, O. M. (2008). Economic performance of commercial poultry farms in Oyo State Nigeria. *International Journal of Poultry Science*, 7(11): 1117-1121.
  21. Central Bank of Nigeria. (2016). Youth Entrepreneurship Development Program (YEDP) Guidelines. Nigeria: Central

- Bank of Nigeria. <https://www.cbn.gov.ng/out/2016/dfd/yedp%20guidelines.pdf>
22. Padhi, M. K. (2016). Importance of indigenous breeds of chicken for rural economy and their improvements for higher production performance. *Hindawi Publishing Corporation Scientifica*, Article ID 2604685. pp 1-9 es <http://dx.doi.org/10.1155/2016/2604685>.
  23. American Poultry Association. (2015). APA recognized large fowl breeds and Varieties. *The American Poultry Association Publication*, pp 1–7.
  24. American Poultry Association. (2020). The American standard of perfection, illustrated. A complete description of all recognized varieties of fowls Paperback. Alpha Editions. pp 374.
  25. Roberts, V. (2008). British Poultry Standards. John Wiley and Sons. pp 480.
  26. Allonby, J. I. H. and Wilson, P. B. (2018). British Poultry Standards 7th Edition. Wiley-Blackwell. pp 520.
  27. Pam, P. (2006). The field guide to chicken. Voyageur Press. ISBN 0-7603-2473-5.