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Local chicken production: strategy of household poultry development in coastal regions of Niger Delta, Nigeria

J. I. Kperegbeji*, J. A. Meye** and E. Ogboi*

*Department of Agricultural Technology, School of Agriculture, Delta State Polytechnic, P.M.B. 5, Ozoro, Nigeria

**Department of Fisheries Technology, School of Agriculture, Delta State Polytechnic, P.M.B. 5, Ozoro, Nigeria

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ABSTRACT: The egg and meat production of local chicken (*Gallus domesticus*) is an indispensable component of household poultry development. The rapid production of local chicken has become a commercial trend in coastal regions of Niger Delta. Consumers prefer local chicken equally to that of cockerel and they consider it tastier than the broiler meat. Local chicken production management is easier than the broiler production particularly in the coastal regions where modern facilities including electric supply are not available. In this region, the household poultry keeper derived an economic importance of lower chicken price, lower mortality and morbidity, lower management cost, lower initial investment, better market demand, low abdominal fat, less disease susceptibility, more organoleptic preference. Household labour utilization and easy management are the strategic advantages of local chicken rearing at household poultry farming. The government should adopt a system of approach to local chicken development which will encourage adaptive and basic research in genetics and breeding, health care packages, feeds, feeding and nutrition, general management, economic and social aspects of raising the profitability and usability of local chicken for high productivity.

Key Words: Local chicken, household, improved, production, meat, management

Introduction

Local chicken production, which is still important in low income food deficit in the state, is an appropriate system to support the fast growing human population with high quality protein. Local chickens have been used in small scale indigenous poultry production in the coastal regions, chicken production is important because of the divergent roles it plays. Sale of eggs and live birds in urban and rural markets is perhaps the only source of cash earnings available to rural families. Chickens are also used in traditional caring rituals, means of knowing the time, offered as gifts and in cementing marriages and friendship. In communities where food shortages are uncommon, chickens are kept to supplement the meals or to honour a guest (Nwagu, 2002).

Adesimi (1988) observed that high cost of feeds, poor quality of day old chick (DOC) and brooding techniques involved has been the bane to industrial poultry production in Nigeria. These problems associated with industrial poultry production makes household local chicken production in Nigeria popular. Local chicken production contributes significantly in food security, poverty alleviation and ecologically sound management of natural resources. The scope for utilizing local chicken as a source of poultry meat is high because consumers prefer its hard meat. There is a growing demand of local chicken in restaurants because of its sizes, low prices and their palatable meat when compared to exotic breed of poultry.

The total poultry population in Nigeria has been estimated at between 133 – 165 million (FLDPS/RIM, 1991). However, there is consensus that about 90% of the figure derives from the local poultry stocks which is in turn composed of chickens (91%), guinea fowl (4%), ducks (3%), turkeys and others (2%). Poultry, which is next only to ruminants as a source of animal protein in Nigeria, accounts for almost 25% of local meat production.

Moreover, in the context of Niger Delta, local chicken production and management is easier than the broiler and pullet production particularly in the coastal areas where modern facilities including electric supply are not available, and high frequency of the coastal environment predisposed the exotic breeds of poultry to diseases. Since local chicken production is a fast growing agricultural business in some part of the country, profitable production of local chicken is essential. The need for this study can therefore be seen in the desire to improve the strategies level of productivity in local chicken production and also to highlight on the problems associated with the production in the study area.

Status of Local Chicken Production

Generally, there are three kinds of local chicken production systems in coastal regions namely rural, the free-range low input system, backyard and semi-intensive husbandry system. Local chicken still dominates the poultry production in coastal areas of Niger Delta. They are available and it was reported that about 80% of poultry meat come from local scavenging chicken (Paul and Islam, 2001). Almost every family of rural dwellers in Niger Delta is habituated in backyard poultry keeping and rural household maintains about 6 – 16 chickens (Paul *et al.*, 2003). Poultry production started to gain commercial momentum in Niger Delta since mid-70 when commercial poultry strains were first introduced in the region. Today, poultry is a profitable industry and this industry is mainly developed in urban and semi-urban areas where modern input (feed, vaccines, electricity) and output (product, market) facilities are available. However, commercial chicken production gained momentum few years ago. It is estimated that the share of poultry in the animal protein of human diet increased from 14% in 1977 to 23% in 1987 and is further estimated to 30% in 1995. The total population of commercial chicken in Niger Delta is about 5.4 million whereas 111.7 million are local chicken (Paul and Islam, 2001) and the local chicken is estimated to supply 71% of the total meat.

With the rapid development of exotic breeds of poultry rearing in Niger Delta, the availability of local chicken of both cock and hen has decreased. But the scopes for utilizing these local chickens are not systematic as yet. The production of local chickens in the coastal region of Niger Delta is still very sporadic.

Consumers Situation

A better plan for the utilization of the vast quantities of local chickens such as cock (Meat Birds) after growing up to the size of 1200g to 1500g which is a preferable size to the majority of the consumers in Niger Delta. It is estimated that apart from exotic breed (broiler type) or other sources of chicken meat, utilization of these redundant local chickens may add up to 14850 metric tons of meat. Many consumers choice local chicken than exotic type (broiler and spent layer) and they can easily buy local chicken within their buying capacity. Live local chicken is more preferable to the consumers than dressed chicken as it is sometimes being processed and sold to those fast food industries or individual interests.

Consumers Choice of Preference

Lower chicken price, lower mortality and morbidity, lower management cost, lower initial investment, better market demand are the strategies advantages for local chicken production at household poultry farming in Niger Delta. Indigenous birds are very popular poultry meat to the coastal people or consumers cannot easily differentiate between dressed cock local chicken and the exotic cockerel meat. Recently, there is trend of demand of local chicken in the restaurants because of their smaller size and consumer demands where both restaurant owners and consumers have benefited which is creating an opportunity for local chicken production in Niger Delta especially in the coastal areas.

Meat Status

The local chickens are harder than the exotic breeds of broiler and the taste, flavour and juiciness are almost similar to the exotic cockerel stocks. Excessive abdominal fat particularly in broiler leads to

consumer rejection and adds to processing difficulties (Crawford, 1990). Haleem (1987) advocated the suitability of local chicks from exotic strains for preparation of chicken delicacies due to its desirable flavour, less abdominal fat and juiciness. Local chicken contains 56% water and 320 calories, 100g of meat energy, whereas 71% water and 151 calories for exotic broiler (Singh, 1990).

Local Chicken Rearing System

The household poultry farmers in coastal regions of Niger Delta prefer to rear local chicks due to low cost of day-old chicks than the broiler chicks. Moreover, the farmers believe that the local chickens are less susceptible to diseases compared to broiler strains (Sil *et al.*, 2002). The commercial poultry hatcheries sell their local chicks for N30.00, which is about 3 to 4 times lower than the price of day old broiler chicks of exotic breed. But like Nigeria, there is no specialized feed for local fowl feeding. There is no established local fowl management guide or manual which helps profitable local chicks rearing and production. Even then, rural farmers begin local chicken rearing with great enthusiasm for consumers choice, lower management cost, more organoleptic preference, family labour utilization and easy management practices.

Constraints Associated For The Development Of Local Chickens

The major constraints for the development of local chickens for specialized markets are highlighted below:

- Low growth intensity
- Required a prolong flattening period
- Results in very small carcasses
- Low body weight
- Risks of high mortality to Newcastle disease during harmattan period and to predation
- Low body size and egg size
- Production of white egg which is not preferable to consumer
- Low hen day (percent) and hen housed (number) egg production
- Low rate of laying

Problems Associated With Local Chicken Production In Niger Delta

- Lack of information to upgrade the meat and egg performance of local chicken
- High cost of exotic pure breed parents stock
- Lack of storage facilities, e.g. vaccine, fertile egg and processed meat
- Inefficient cash flow projection marketing strategies
- Lack of incubation technique for mass production of chicks
- Lack of brooding technical know-how
- Lack of electric power supply
- Lack of medication and vaccination health programme
- State of the nation economy, e.g. lack of purchasing power
- Lack of transportation equipment
- High capital outlay and operative fund and other problems that affects local chicken production

Improvement Strategies

The local chicken production is an established component of the rural economy. For this reason, the necessity for its development has always been recognised but insufficiently pursued. Eshiett and Okere (1989) evaluated the characteristics of the local chicken and recommended strategies for their improvement through breeding and selection. Their recommendations include:

- Management of local chickens under improved and intensive conditions
- Improved management and selection for desired traits
- Crossbreeding with improved exotic strains

- Selection of exotic chickens for adaptability to local government

Conclusion And Recommendations

The local chicken dominates poultry production at the coastal regions of Niger Delta. More meat, eggs and other products can be obtained from them by raising the present level of inputs.

Appropriate innovative systems should include genotype improvement development of diets based on locally available feedstuffs, design of cheap housing units, research on oral and oil-based vaccines, product development and sustenance of marketing systems. A system approach to local chicken development should encourage adaptive and basic research in genetics and breeding, health care packages, feeds, feeding and nutrition, general management, economic and social aspects of raising the profitability and usability of local chicken species are other considerations.

It was observed that Newcastle disease has been identified as the bane of local chicken which occurs between November and February. It will be useful if the government of the federation should carry out a nationwide vaccination programme during this period. Above all, the aforementioned strategies should be also considered.

References

- Adesimi, A.A. (1988). Farm Management Analysis with Perspectives Through the Development Process, Pp 183.
- Crawford, R.D. (1990). Poultry Breeding and Genetics, Elsevier Amsterdam Oxford-New York-Tokyo
- Eshiett, N. And Okere, C. (1989). A Survey of Rural Poultry Production Systems in the Humid Tropics of South-Eastern Nigeria. International Workshop on Rural Poultry Development in Africa. Ile-Ife, Nigeria. P. 236 – 247
- FDLPS/RIM (1991). Nigerian National Livestock Survey Report. Federal Department of Livestock and Pest Control Services, Abuja, Nigeria.
- Haleem, M.A.; Moorijani, M.N. and Rao. R.J. (1978). Studies on Utilization of Male Chicks from Layer Strains. Proceedings of the 6th Annual Symposium of International Poultry Science Association, Jabalpur, India, P 6.
- Nwagu, B.I. (2002). Production and Management of Indigenous Poultry Species. A Training Manual in National Training Workshop on Poultry Production in Nigerian National Animal Production Research Institute, Shika, Zaria. 10 – 26pp.
- Paul, D.C. and Islam M.R. (2001). Impact of Local and Commercial Chicken in Bangladesh Poultry Industry. Paper presented in the 1st SAARC poultry conference 2001 held on 24 – 26 September, Pune, India.
- Paul, D.C.; Huque, Q.M.E.; Islam, M.R. and Jahil, M.A. (2003). Organic Chicken Farming, A Tool for Family Nutrition and Cash Generation: Bangladesh Perspective Proceedings of 3rd International Poultry Show and Seminar, Feb 28 – March 2, 2003, Worlds Poultry Science Association, Bangladesh Branch, Dhaka, Bangladesh, Pp 237 – 243.
- Sil, G.C.; Das, P.M.; Islam, M.R. and Rahman, M.M. (2002). Management and Disease Problems of Cockerels in Some Farms of Mymensingh, Bangladesh. International Journal of Poultry Science 1(4): 102 – 105.
- Singh, R.A. (1990). Poultry Production, Third Edition, Kalyani Publishers, India.