

**IMPORTANCE OF CREATIVITY AND INNOVATION IN POULTRY FARMING**

**Dr.S.C.Vetrivel\***

**Dr.M.Mohanasundari\*\***

*\*Assistant Professor (Sel.Grade), Department of Management Studies, Kongu Engineering College, Perundurai,  
Erode-638052*

*\*\*Assistant Professor, Department of Management Studies, Kongu Engineering College, Perundurai, Erode-638052*

**ABSTRACT**

Innovation is the depth knowledge of maintaining and growing poultry farms. This applies to all aspects in the industry, such as incubation, health, nutrition, housing, processing and so on. Many research institutes along with commercial companies are continuously conducting research and introducing innovation methods to further improve the efficiency and management of poultry. It is observed that there's the different viewpoint of farmers and researchers. Poultry farmers must run profitable businesses, balancing a slew of factors including operating costs, capital costs, staff management, animal husbandry, welfare, etc. to produce an income. Whereas researchers, on the other hand, first form a hypothesis about an area of interest and then test the predictions that hypothesis makes to evaluate it. A system has to be evolved to bring poultry farmers and researchers closer together, so that the innovation and output of the researches will be best utilized in the commercial poultry farms.

**Key Words:** Knowledge, Management, Welfare, Commercial, Efficiency.

**1. INTRODUCTION**

Smallholder poultry farming makes an important contribution to the livelihoods of rural households in Pacific countries (Daghir, 1995). In the traditional rural setting dominated by smallholder farms, poultry have little shelter, are allowed to scavenge for feed, and are free to wander. This system is cheap as little husbandry and few management skills are required. There are considerable problems with this system, including slow growth and poor productivity because of energy and protein deficiencies, poor bird genetics, losses because of predators and theft and damage to gardens. However, many smallholders have changed from producing poultry solely for household purposes to farming meat birds and layers to produce eggs for sale in local markets. They have adopted improved housing and nutrition and use modern genetic strains fed on commercial feeds. The viability of these semi-commercial operations has been threatened by the

rising costs of imported ingredients and feeds. When transport problems are added (and these are also made worse by the rising real cost of fuel), the smallholder poultry industries that rely on imported ingredients struggle financially. Smallholder operations will be substantially improved if feeding regimes based at least in part on local ingredients can be developed as an alternative to imported complete feed or feed ingredients from overseas.

There has been a 500% and 300% increase in per capita consumption of eggs and meat, respectively, over the last 50 years, linked to the rapid increase in poultry production in developing countries worldwide. Poultry products are popular sources of high-quality protein, reflecting their high efficiency and relatively low cost of production. The greatest increase in livestock production in developing countries in the future is expected to be in poultry, eggs, pork and milk (Delgado et al., 1999).

A significant proportion of poultry meat and eggs produced in some developing countries comes from small-scale family units, either from small semi-scavenging flocks of indigenous birds or from small commercial flocks of broilers or layers reared in confinement and provided with commercial feeds. One of the major impediments to the efficiency and profitability of production is a lack of knowledge on poultry nutrition, health and management. The major constraint is often the feed supply. Commercial feed may not be available or must be imported or transported over long distances in-country. It is also very expensive and accounts for about 70% of the total cost of production. The viability of small-scale producer operations has been threatened by rising costs of imported feeds.

Effective rations for poultry can be developed from local sources. Four feeding strategies could be adopted by smallholder farmers depending on feed resources available (a) complete ration formulation using local feed ingredients; (b) free choice of feed ingredients; (c) mixing a concentrated diet with local feed ingredients and (d) dilution of a commercial diet with locally available food products. Adoption of such feeding systems is considered a solution for ensuring the viability of poultry farming.

## **2. INNOVATION IS THE DRIVING FORCE IN MODERN POULTRY FARMING**

Without innovation it would be impossible to keep pace with the growing global demand for poultry products, meat as well as eggs. In poultry farm areas of operation includes incubation,

health, nutrition, housing, processing, farm management, Human Resource Management, Financial Management and marketing of poultry products.

## **2.1 STRATEGIES FOR REDUCING FEED COSTS**

Reduced feed costs lead to improved production efficiency and profitability of poultry enterprises. Feeding and management strategies will help in achieving these targets. Farm resources, management policies and mode of production are determining factors.

Broiler chickens are usually fed on an ad lib basis to allow them to get their energy needs and to achieve their target weights in shorter periods of time. In recent years, however, timed feeding of broilers has been recommended for economic reasons. Here, the birds are fed a set amount of feed 4-6 times a day so they finish their meal and are then held without feed for about one hour or less. This has two beneficial aspects. First, it reduces the chance for the mechanical stimulation of feed intake that is often experienced when running the feeders throughout the day. Second, during these times without feed birds are usually quiet, and this may improve feed utilisation due to the reduced maintenance feed requirements.

Feed costs can be reduced through the following methods.

- a) Manipulation of feed ingredients
- b) Use of synthetic amino acids
- c) Enzyme supplement
- d) Use of flavours
- e) Feather cover

Disease control

- Development of poultry rations for village farmers
- Development of a concentrated diet that can be blended with local feed ingredients
- Free-choice feeding
- Dilution of a commercial diet with locally available food products.
- Control of feed wastage through

- Feed troughs
- Adjusting feed level in the feeders
- Beak trimming
- Rodent control
- Feed spoilage

## **2.2 MANAGEMENT OF MORTALITY**

Dead birds dying or destroyed on the farm can become an important source of diseases by serving as a direct source of germs and attracting insects, pests, and wild animals that carry diseases. With proper mortality management and effective bio-security programmes, many of these problems would be alleviated and production would hence be improved.

### **2.2.1 DISPOSAL METHODS**

The following is an overview of the methods that have been proposed for disposal of dead birds. The choice of the method to be adopted depends largely on factors such as farm economics, magnitude of mortality (routine or catastrophic), and the need to have such birds recycled and used in animal nutrition, soil fertilization, or other purposes. In many cases, however, there might be a need for adopting more than one method at one time in order to better arrest the bird disposal problem.

#### **(a) Composting**

Composting is a controlled, natural process in which beneficial micro-organisms reduce and transform organic wastes into a useful end-product called compost. Composting provides an economically and biologically safe means of converting carcasses resulting from daily mortality into an odourless humus-like material useful as soil fertilizing agent. Studies have indicated that the use of the compost in fertilizing gardens and nurseries has resulted in an improvement of 40% in crop production.

#### **(b) Disposal pit**

The disposal pit is, in its simplest form, a shored-up hole dug in the ground with a small diameter opening at the top through which carcasses are dropped into the hole, providing an environment

for both aerobic and anaerobic micro-organisms to decompose organic materials. In the past, this type of structure was adequate for small producers with a limited amount of daily mortality. Today, with larger birds and flock sizes, poultry producers are using concrete or timber-lined pits to assure proper performance and useful life of the structure.

**(c) Incineration**

Incineration is often the chosen method of disposal in poorly drained areas where pits are not acceptable or where rocky soil makes digging expensive. Recognized as one of the most biologically safe methods of disposal, incineration curtails the spread of disease and does not create water pollution problems. The comparatively small amount of waste by-product (ash) does not attract insects or scavengers and can be disposed of easily.

**(d) Lactic acid fermentation**

Lactic acid fermentation is an anaerobic process that takes place in an air-tight tank where lactic acid bacteria transform sugars into lactic acid. The production of lactic acid creates acidification, which decreases the pH of the carcass material. Under optimal conditions, fermentation reduces the pH from 6.5 to 4.5 within 48 hours. This decrease in pH preserves the nutrients and permits the carcasses to be stored for several months before rendering or use for other purposes.

**3. CONCLUSION**

Local feed resources are available that could be utilized more effectively for feeding poultry for better and economical farm management. To further develop well balanced diets and promote the industry, technical and financial support are required to encourage the establishment of small-scale feed mills used by the poultry farmers and private agencies to make cheaper concentrate diets based mainly on locally available feed resources and reduce dependence on costly imported ingredients. It is suggested that there is a significant reduction in costs when poultry diets are manufactured by mini-mills using local feed ingredients. Ensuring the quality, cost competitiveness, and reliability and efficiency in supply of locally produced feed can contribute to improving the profitability and sustainability of the small-scale poultry sector.

**REFERENCES**

1. P.C. Glatz, Science Leader, Pigs and Poultry, South Australian Research and Development Institute, Roseworthy Campus, University of Adelaide, South Australia 5371, Australia
2. Dagher, N.J. 1995. Poultry Production in Hot Climates. CAB International, Wallingford, UK.
3. Delgado, C., Rosegrant, M., Steinfeld, H., Ehui, S. and Courbois, C. 1999. Livestock to 2020: the next food revolution. IFPRI, Food, Agriculture, and the Environment Discussion paper 28. Washington, D.C., USA: IFPRI.  
<http://www.ifpri.org/sites/default/files/publications/vb61.pdf>
4. ALFID. 2002. Australian Livestock Feed Ingredient Database. SARDI, Roseworthy, South Australia.
5. Black, I.D and Yalu, M. 2010. An ex-ante benefit-cost analysis of the impact of the research, development and extension programme that provided feeding strategies to improve the profitability of village broiler production in Papua New Guinea. Journal of South Pacific Agriculture 14: (1&2): 23-27.
6. Dagher, N.J. 1995. Poultry Production in Hot Climates. CAB International, Wallingford, UK.
7. FAO. 2012. Feed Resources Information System, Animal Health and Production Division, FAO, Rome. <http://www.fao.org/ag/AGA/AGAP/FRG/afris/default.htm>

\*\*\*\*\*