

# HOME ECONOMICS FOR AGRICULTURAL SCIENCES IN TERTIARY INSTITUTIONS



**E.F. Fabiyi (Ph.D)**

**HOME ECONOMICS  
FOR  
AGRICULTURAL SCIENCES  
IN  
TERTIARY INSTITUTIONS**

**First Edition**

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## FOREWORD

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**T**here has been some fundamental transformation in the household patterns, behaviour and lifestyles of the Nigeria consumers. Apparently this is influenced by changes in socioeconomic, demographic and income status of the society. This transformation has resulted to greater awareness of household dieting and the need for healthy sustainable livelihood. This calls for more cognizant information, to which this book aims at providing. Thus, this ever changing behaviour of Nigeria consumers warrants a readily available source of reference for information on what and how to consume products and services.

This book, titled "Home Economics for Agricultural Sciences in Tertiary Institutions", is not meant for students only but also as a reference material for food industries, health institutions and service providers. The book is a valuable source of information for decision-making process and healthy living.

The book is written by an author who is very much conscious of the livelihood need and demand of Nigerian consumers. The author has made use of some ideas in home economic syllabi for tertiary institutions. There is no doubt that the book will narrow down the wide gap between home information need and supply of such information for an

adequate standard of living. Reference to the book will raise its reader's environmental consciousness and concern for more sustainable livelihood in our communities.

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## PREFACE

**H**ome economics is a relatively young profession in Nigeria and it is still encountering difficulties in becoming established. The nation is made up of family units of the oldest institution. In most developing countries, little importance has been attached to the studying and teaching of home economics in schools and universities. It has been regarded as a profession mostly involving sewing and cooking for girls and women only. The primary target of home economics is the improvement of the home and family in which women, men, youth and children have paramount interest. Since the home is as strong or as weak as the individual that comprises it, likewise the community and nation are strong or as ineffective as the families that make them. Today there has been increase in basic knowledge about the individual and the household home. The management of the home has become more complex. The introduction of appliances, equipment and modern kitchen tools makes it necessary for an education more comprehensive to help cope with the technological changes. Both men and women need the education that will help them to enjoy what they have which is the main aim of Home Economics.

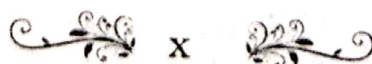
With the development in technology and increased demands for improved standard of living, both boys and girls need the knowledge of home economics especially, those dealing with producing, processing, cooking and marketing of agricultural products. The planning of the agricultural science courses at every level should be fully coordinated with home economics,

so that students are helped to understand the interrelationships between home economics and agriculture. Home economics utilizes almost all agricultural products in the area of food, clothing, interior and exterior decorations.

What makes home economics so important is that it deals with all aspects of human life and the home. Its flexibility makes it a subject that can be used to improve people's life at any stage and time. Home economics deals with food and nutrition, home management, textiles and clothing, food preparation and family relationship and childcare. This is the more reason why everyone should have knowledge of home economics. Food and nutrition are important for good health, textile and clothing for good physical appearance and dress sense, while good family relationship brings about happiness and satisfaction in the home. Home economics should be taught at all levels of education because of its many roles in the family and national development.

Home economics is flexible this makes it a subject that can be used to include necessary factors or topics that can be taught to solve individual and family problems. Home Science is the best title to replace Home Economics because Home Economics does not capture and reveal all what the subject entails. Home Economics is not only about the economics of the home but it entails the scientific application of all aspects of individual and family living. It is necessary to review school syllabus from time to time to make it meet present standard of living of individuals and families.

The main reasons for teaching home economics to students of agriculture is not just to know how to cook food but to know how to care for self and their family members, and to know the right kind of food to eat. The main objective of



teaching Home Economics to students of Agricultural science is to follow up their farm produce to how they are nutritionally cooked and served on the family table.

This is very important because what we eat determines to a great extent the state of our health. No medicine can do as much for our health as the healthy foods we eat every day.

The main aim of this book is to help students of agriculture and others to be able to face life with confidence. Also to have knowledge that takes care of every aspect of life and to be able to see the importance of self-reliance and become useful members of the family, community and the nation at large.

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# DEDICATION

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This book is dedicated to the Almighty and Omniscient God, for giving me the wisdom and ability to write this book, and also to my darling husband Professor Joseph Popoola Fabiyi for his support and encouragement.

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I give all the glory and honour to God Almighty for giving me the strength and enablement to write this book, which is the first of its kind in Nigeria.

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**Dr. (Mrs.) K. E. Akande:** a lecturer in Animal Production, wrote two Chapters from her wealth of experience in the field of animal science and nutrition, “The importance of protein in animal nutrition” (Chapter five) and “Effective rearing of backyard poultry” (Chapter six).

**Dr. U. Haruna:** lecturer of Agricultural Economics, wrote about “**The role of women in agricultural activities**” (Chapter eleven) using his rich teaching experience as a lecturer of agricultural subjects.

**AUTHOR: Dr. (Mrs.) E. F. Fabiyi**

## CHAPTER

# 6

### **EFFECTIVE REARING OF BACKYARD POULTRY**

#### **6.1 Rearing of Backyard Poultry Chickens**

Effective management of domestic animals in general involves proper handling, housing and fencing, good health care and feeding. There are many animals that can be successfully reared at home. Some of these are: poultry, goats, rabbits and sheep.

In recent years raising backyard chickens has gained much interest. Additionally, it has become a rewarding venture. A lot of people have been able to produce their own good quality meat or/and eggs. A successful home chicken flock will require good breeding stock combined with good management, disease control and an adequate and balanced nutrition. Good management of small poultry flock will improve the liveability, growth rate and egg production. A well-managed backyard flock can supply a family with fresh eggs and meat, providing the needed food security, subsidiary income and also empowers the people involved in the production.

Housing for backyard poultry does not necessarily have to be elaborate or costly in any way. A portion of land near the home

of the owners will be adequate and appropriate for easy access. The size of a typical backyard poultry house should be based on a minimum of three square feet of floor space per bird. The shelter for the backyard poultry should essentially have a covering roof and side walls for proper protection from wind, rain and predators.

## 6.2 Feeding and Care of Backyard Poultry

Proper animal nutrition is the key to a successful livestock production. Good nutrition can increase feed efficiency and growth rate of livestock animals. Farm animals should be fed diets that meet their needs (Anon, 2011).

The easiest and simplest way to feed a small flock of chickens in the backyard is to purchase a commercial feed. In essence, the use of commercial feed requires no additional supplements. A cost-effective alternative feeding method provides the chicken with the combination of commercial feed and grain feeding coupled with free range which allows the chickens' access to a variety of green plants and insects. A constant supply of clean, fresh water is essential for healthy birds. Clean and fresh water must be provided at all times for the chickens in strategic and conspicuous places. Generally, in hot seasons water consumption will increase. Taking proper care of your chickens will ensure that they stay healthy, and will help you get the most eggs out of your poultry flock. Chickens raised in backyard settings generally stay healthy and are not easily susceptible to diseases. Basically, it is however, important to monitor and observe your backyard chicken regularly in order to detect signs of abnormal

condition early for adequate measures to be taken to prevent its spread. Observable abnormal signs are; when the chicken is not feeding, having watery or unusual droppings, laboured or abnormal respiration, sneezes or wheezes, lame chicken, dull or discoloured comb.

### 6.3 Basic Management Principles of Keeping Backyard Poultry

- Start with quality bird stock purchased from a good hatchery. And also provide good and adequate shelter from harsh weather conditions and predators like, cat, owl, raccoons, rats and hawks.
- Giving feed supplements to chicks for two to four weeks will normally increase the number of chicks that survive from a hatch.
- Inspect the birds every morning; wash the drinkers on a daily basis. Supply fresh feed and water.
- Cleaning of the chicken house should be done regularly with disinfectant.
- It is of paramount importance to maintain a clean environment to avoid contamination of premises and spread of infection to avoid disease outbreak.
- Inclusion of coccidiostat for example *amprolium*, *furazolidone* in the feed produces some immunity against *coccidiosis*.
- Treat the birds with *ivomectin* to protect them against both *ectoparasite* and *endoparasite*.
- Screen out wild birds and rodents from the poultry pens.
- Necessary precaution should be taken before introducing new chickens into the flock.

Dispose of dead chicken promptly and properly by either burning or burying them far-away from the chickens' house to prevent the spread of diseases.

It is essential to provide good and comfortable nests for laying chickens. One nest box is required for each five hens in the flock, and locate it approximately two feet above the ground. A perch may be placed in front of each nesting box, thus, making provision for a spot for the hens to land prior to entering the nesting box. Nesting boxes should be checked for eggs about two to three times daily. Eggs should not be allowed to accumulate in the nests. Or else the hens may stop producing eggs and want to sit on the eggs to incubate them. This type of hen is commonly called a "broody" hen. Nest box sanitation and hatching egg care are important for the production of healthy chicks. Nest material must be cleaned and dried and free from contamination.

- Ensure you follow proper vaccination programme and guideline.

**Do not vaccinate chickens under the following conditions.**

- (i) During the period of hot weather.
- (ii) When the chickens have disease such as coccidiosis.
- (iii) When they are undergoing other medications.
- (iv) When chicken are off feed.

**In order to reduce vaccination failures avoid the following**

- (i) Do not open vials until you are ready to use them.
- (ii) Mix vaccines thoroughly.

- (iii) Follow manufactures procedures for vaccination.
- (iv) When using water type vaccines, be sure there are no sanitizers like chlorine in the water (use clean well water).

#### **6.4 How to Successfully Keep Local Chickens**

Backyard poultry keeping is increasing in popularity in Africa and other developing countries of the world. Chicken is the commonest type of poultry and is found everywhere in Africa. This is because it is well adapted to tropical climatic conditions and can be easily managed. The meat and eggs are good quality protein sources. Local chickens are better than exotic breeds (imported) as they are more handy than those that are being treated and fed with antibiotics and artificial foods. Natural foods and meats are better for good health.

Antibiotics are used in the treatment of infectious diseases and/or for rapid growth of livestock and poultry. If recommended procedures are not followed on the farm, this may give rise to residues in foodstuffs (meat or eggs). Follow instructions correctly to avoid food poisoning. Keeping of local chickens for family consumption helps to increase protein intake. It is easier and cheaper to keep local chicken than exotic layers and broilers. Local chicken are easy to handle than the exotic ones. The method of keeping local chicken is by free range. Free range means that the chickens are left to find their foods. To have a successfully rear and keep local chickens, the following steps can be followed and adopted.

- Make a cage for housing them after returning home. The cage must have enough ventilation and must be kept clean always.

Cover the floor of the cage with saw dust and change them regularly.

Make partitions in the cage for laying eggs and for keeping the young ones. Do not allow the young ones to be together with older ones except the mother hen.

To start rearing or keeping of local chickens buy about four ready to lay healthy hens, with red comb (not pale) and one healthy male (cock) with red comb, heavy and active. Do not buy more than one male (cock). One male is enough to serve four hens (female)

Make water available outside for the chickens and feed them in the morning before they go outside and in the evening when they return home. This helps them to grow fast. What they get from outside is not enough for their growth. Give them good left over foods and other food and kitchen wastes. Keep the chickens warm during raining or cold season. It is essential to separate and isolate the sick chicken promptly from the flock to avoid the spread of diseases.

### 6.5 Questions

1. What are the advantages of keeping backyard flock?
2. Outline the management practices of rearing chicken.
3. Briefly describe how you will feed and care for backyard local poultry.

What are the precautions you need to take before vaccinating chicken?