

Simply..... Poultry Science



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BY
PROF. R. ASHA RAJINI

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FOREWORD

I am pleased to write the foreword for the book "Simply... Poultry Science". The book has been written at a time when the Veterinary Colleges have changed over to the new VCI syllabus and hence, it is very useful for the under graduate student. It is simple and yet informative. It seems that a meticulous effort has been made before writing this book. It is organized and planned well to help the students to comprehend and learn. The influence of breeding and management on production has been clearly explained. The chapter on 'Poultry Industry' will be an eye opener to the students as it explains the massive expansions that are taking place in India. The new chapters on rural poultry, hill farming, mixed farming etc. have been dealt in a lucid manner to help the freshers. Chapters on diversified poultry such as Japanese quail, Turkey and Ducks will make interesting study material to the students and also make them understand how each differ in their production characteristics, and the principles and practices of farming them. The author has been associated in the Department of Poultry Science for many years as a teacher, investigator and extension worker. This book promises to bring forth new ideas and goals. The book has been judicious in its focus - for academics. I commend the author for having taken all the effort to write this book.

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Preface

The Indian Poultry Industry has made tremendous strides in the past thirty years. It has been modernized and is willing to embrace any effective change introduced by the researching community of poultry scientists. The purpose of this book is to bring factual information to the students who are new to the subject. The subject matter has been prepared as a general poultry course to meet the new Veterinary council of India (VCI) syllabus for all the under graduate veterinary students studying poultry science. It is hoped that this book would also be a boon to many others.

Topics on rural poultry and improved varieties of chicken places emphasis on the Indian Government's new policies. Conserving the native germplasm is an ongoing work by few and serves to be an eye opener for young minds. Each chapter, slowly and steadily, leads the student to get a clear idea of Poultry Science. Topics like management of Ducks, Japanese quail and Turkeys will be new to students and probably quite interesting. I have taken much effort to make the book simple and readable to the fresher and for it to be useful at a later date. A definite effort has been made to highlight various managemental concepts and other technical issues. This book has been made possible by the wise counsel and competent assistance of numerous teachers, colleagues and friends. My gratitude and appreciation goes to all who have helped me over the last thirty years. Any book is a real event and dependant on many human and technical sources. I would not like to omit the student, whom I invite to submit ideas and achieve himself/herself to be a participant in an educational experience. I greatly appreciate the courtesies extended by my university the 'Tamilnadu Veterinary and Animal Sciences University'. I am indebted to my husband for help in many ways concerned with the preparation of the manuscript.

R.Asha Rajini
Chennai
April 2011

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The term 'poultry' is used collectively to designate those species of birds that have been domesticated to reproduce and grow in captivity and that render products of food and economic value. Many species fall under this 'Term' like the chickens, turkeys, ducks, some quail, geese, guinea fowls, pheasant, pigeons, emus, ostriches etc. They provide meat, eggs, oils, feathers, fertilizers and many others by-products for many industries.

Domestication of poultry

Two scientific names are used for chicken; they are Gallus gallus and Gallus domesticus. There are four living species of wild jungle fowls, all closely resembling the domestic fowl. There may have been more species which now are extinct, but there is no scientific proof that any others existed in recent geological time. The four wild species, all living in Southeast Asia, are: Red jungle fowl (Gallus gallus), Grey (G. sonnerati), Ceylon (G. lafayettei), and Green (G. varius). The Red jungle fowl (Gallus gallus) is the species that most closely resembles chicken. It has the largest natural distribution of any of the jungle fowl species, occurring from Pakistan and India to south-eastern China, through Burma and most of Indochina and on the islands of Java, Sumatra, and Bali. The Grey jungle fowl (Gallus sonnerati) is found in western and southern India. The Ceylon jungle fowl (Gallus lafayettei) is found only in Sri Lanka. The Green jungle fowl (Gallus varius) differs considerably from the other three; it is found in java.

Poultry industry - world

Global poultry meat and egg production, as well as trade have shown remarkable positive changes over the past 35 years between 1970 and 2005. Poultry meat and egg production increased faster than beef, veal or pig meat production. Increase of beef and veal was 57.6%, pig meat - 186.4% while poultry meat was 436.5% and hen eggs - 203.2%. As per the USDA report in 2008 the largest increase in prices has, however, been observed for poultry products. It has been observed that 54 percent of the increase in meat production for 2008 will come from poultry meat, as it continues to remain the most affordable meat. The estimated production of poultry meat in the world meat market is 92.9 million tonnes. In developing countries, sustained high economic growth will continue to increase demand for meat, especially for low priced protein-rich meats such as poultry. The broiler production in Thailand and china was expected to increase while India was expected to lower production in 2007 by three and two percent. In China the demand for poultry is expected to be more as consumers are substituting broiler meat for pig meat. As for poultry exports, larger sales of chickens meat by Brazil