About the book

Chicken eggs have been considered as a wholesome and complete food because of its balanced nutrient profile suitable for human beings. Egg plays a special role in human diet due to high digestibility, delicious taste and numerous applications in culinary preparations. The book describes update information on chicken eggs based on research supports. The book contains 25 chapters which include physiology of egg production, structure of egg, nutritional value and functional properties of eggs, myths and facts about egg consumption, types of egg etc. Egg contents can be modified to benefit human health and the same is dealt in two separate chapters. Egg quality is very much important from consumer's view point. The egg quality, processing and preservation of eggs, effect of cooking on nutritional value of eggs, microbial contamination of egg and its protection is separately discussed. Many recipes can be made from egg and the same is presented in a separate chapter. The effects of egg consumption on human health and its linkage, if any, to coronary heart disease is presented in two chapters. Eggs are a multifunctional food and some of the nonfood uses like egg white lysozyme, egg yolk as antibody and sialic acid are discussed in separate chapters. To appraise the consumer, the facts on cholesterol are presented in the last chapter.

The authors feel the information provided in this book will definitely be helpful to not only to researchers, veterinary students (BVSC, MVSC and PhD), poultry science students, health professionals, dietitians and poultry industry, but also to the common people.

Price : Rs. 295/- US $ 10

ISBN : 978-81-921893-1-4

Hind Publications

204, Plot No. 19, Huda Complex, Saroor Nagar, Hyderabad - 500 035. India.

Ph: 040-24042046 Mobile: 09291378805 E-mail: hindpoultry@hotmail.com

KNOWLEDGE ENGINE OF CHICKEN EGG

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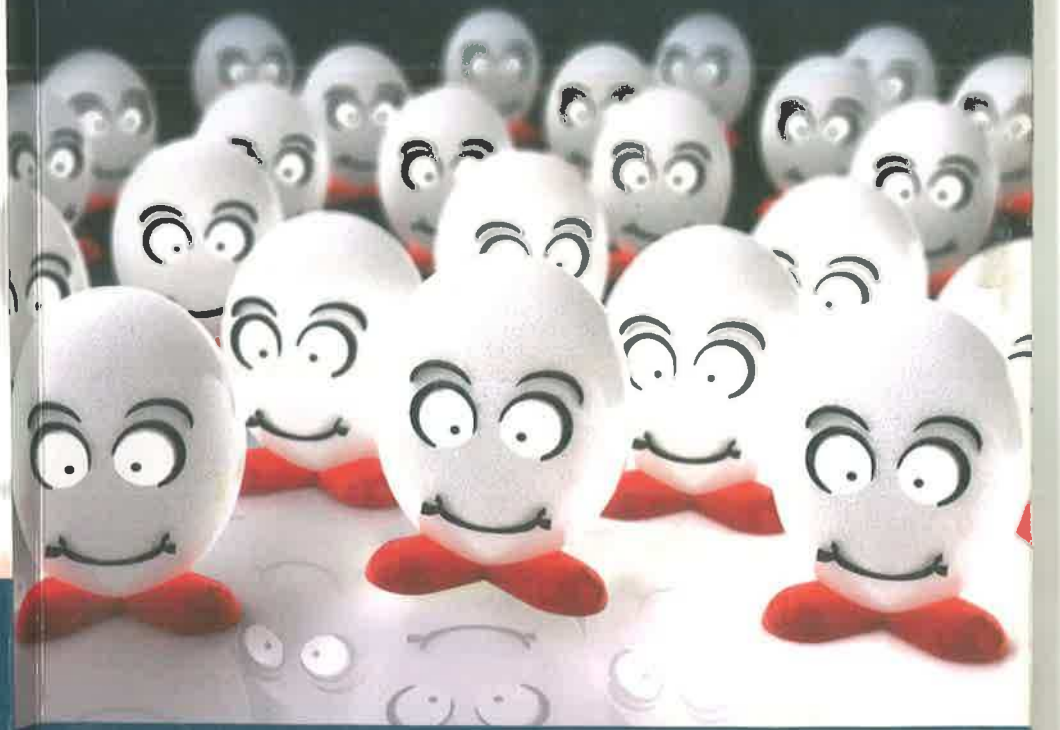
A.K. Panda

S.V. Rama Rao

M.V.L.N. Raju



Published by :
HIND PUBLICATIONS
204, Plot No. 19, HUDA Complex,
Saroor Nagar, Hyderabad - 500 035. India.
Ph : 040-24042046, Mobile : 09391378805
E-mail : hindpoultry@hotmail.com
Website : www.hindpoultry.com

First Edition : 2011

Price : Rs. 295/-

ISBN : 978-81-921893-1-4

Designed by
Balaji Krupa Creations
Ashoknagar, Hyderabad.

Printed at
Akruthi Offset Printers
Chikkadpally, Hyderabad.

Preface

Avian eggs have been considered as a wholesome and complete food because of its balanced nutrient profile suitable for human beings. Components of the egg make it an excellent source of high quality protein, vitamins and trace minerals. Egg plays a special role in human diet due to high digestibility, delicious taste and numerous applications in preparing a wide variety of foods. The high nutritional properties of eggs make it ideal for many people with special dietary requirements. Recent research reveals that eggs contribute to health by providing essential fatty acids and lipids in cell membranes. Interest in modifying the nutrient composition of eggs has been also extended beyond production to design a high quality food for consumption of health conscious human beings. The purpose of the book is to provide up-to-date information on the use of eggs in various usages in relation to human being.

The information provided in the books is based on research supports. The initial four chapters dealt with physiology of egg production, structure of egg, the nutritional value of eggs and its functional properties. The fifth chapter on Myths and facts about consumption of egg has given emphasis to provide the consumers on the scientific truth about egg. Based on the purpose for which it is required, eggs can be categorized into different type and the same is dealt in chapter 6. Now methods are available though nutrition to modify the egg contents to benefit human health which is described in chapter 7. Genotypic modulation through transgenesis can develop special type of chicken which produces designer eggs all the times independent of nutrition and the same is dealt in chapter 8 i.e. Genetically modified egg. In India the availability of egg per person

per year is only 46 compared to the requirement of 180 eggs per person per year. So to aware the common people, researchers, and health professionals another chapter i.e. chapter 9 is dealt with role of eggs in Indian diets. Eggs can also be produced organically and today organically produce products have a great demand in the world and the same has been described in chapter 10.

Egg quality is very much important from consumer's view point and a number of traits are considered for egg quality measurements which are dealt in chapter 11. The processing and preservation of eggs and the effect of cooking on nutritional value of eggs are described in chapter 12 and 13, respectively. Eggs should be protected from the microbial contamination form making it a safe food. The microbial contamination of egg and its protection is covered in chapter 14. Many recipes can be made from egg which can serve during breakfast, lunch or dinner and the same is included in chapter 15. Today consumers are more concern about cholesterol consumption as it is related to Coronary heart disease. The attitude towards egg consumption is changing day by day due to the perception that egg consumption leads to high blood cholesterol levels and increased risk of coronary heart disease. However, the same is not true. The effects of egg consumption on human health and its linkage, if any, to coronary heart disease is presented in chapter 16 and 17, respectively. The egg consumption in relation to health under Indian context is dealt in chapter 18. The possibility of reducing egg cholesterol is presented in chapter 19. The structure-function relationship of egg protein functionality in food system will enable for tailoring food protein for specific use and the same is dealt in chapter 20. Eggs are a multifunctional food and some of the nonfood uses like egg white lysozyme, egg yolk as antibody and Sialic acid from hen egg are included in chapter 21, 22 and 23, respectively. Some other properties of hen egg is covered in chapter 24. The facts on cholesterol are finally presented in chapter 25.

The authors feel the information provided in this compilation will definitely helpful to not only to researchers, veterinary students (BVSC, MVSC and PhD), Poultry Science students, health professionals and poultry industry, but also to the common people.

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