

# MEAT science

## A Student Guide

This book implies a reference book organized similarly to a classroom text and covers the area as per the B.V.Sc. syllabus for Livestock Products Technology prescribed by Veterinary Council of India. The book outlines the most basics of Meat Science and their application in meat processing technology. It contains sixteen chapters and explores the meat composition, colour, structure, conversion of muscle to meat, ageing, processing and other quality attributes of meat and aquatic foods and also more recent topics like genetically engineered foods and organic meat. In addition, chapters on nutritional value and composition of eggs, rules and regulations governing meat exports are also included. Overall the book provides basic information on meat, fish, poultry and egg processing. A question bank containing several objective and subjective type questions was also incorporated at the end of the textbook to provide some orientation to students. The book has been written in a simple language and in a very comprehensive manner. This book will be useful to students, industry people and academia and will provide the readers with a convenience reference book.



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A Student Guide

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M. Muthukumar  
B.M. Naveena

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## Preface

Meat Science is relatively new area compared to other subjects in Veterinary Sciences both in India and around the world. In real sense Meat Science is connected with animal breeding, feeding, management, slaughtering, processing, byproducts utilization, quality control, packaging, storage, distribution and consumption. Meat and aquatic foods are the major commodities with which Meat Science subject is concerned. It is impossible to consider all aspects of this vast area in one book. Therefore, an attempt has been made in this book to outline the essential basis of meat and meat products technology. A number of national and international books with different objectives have been published which provide overviews of the subject but from different perspectives. However, for many undergraduate students who require a simple overview of the subject, these books may be too elaborate and difficult to read and understand. The present book is therefore specifically aimed at undergraduate students' for Meat Science and Technology under Livestock Products Technology as per the syllabus prescribed by Veterinary Council of India. It may also be of interest to teachers and other faculty members involved in teaching meat science courses.

A major challenge for the meat and fish industry continues to be that of producing high quality, wholesome products. In order to meet the consumer demand, meat scientists strive to develop newer technologies for quality meat production and processing. Despite the importance, there are few good books dealing with meat and its processing technology. To achieve the goals, the present book was written with sixteen chapters covering the present status of Indian Meat Industry to advanced meat processing, including organic meat and genetically modified foods.

It is hoped that this book will be of great value to the students, faculty members of Livestock Products Technology/Meat Science/Food technology and to those who have interest and liking for meat both as a text book and a reference manual.

A.R. Sen  
M. Muthukumar  
B.M. Naveena

## Acknowledgement

Authors would like to express deep gratitude to the Indian Council of Agricultural research (ICAR) for all the opportunities we had during our service career with logical thinking and new innovative learning experiences which transformed into this book. We would take this opportunity to thank all the Meat Scientists and technologists throughout the country for their cooperation and support to write this book.

We are also thankful to all the international experts in this area for providing concepts and different principles of Meat science which has been reflected in this book. In addition to acknowledging specified indebtedness to various individuals and institutions, we should like to express our appreciation of the co-operation of all the staff associated in different Institution and organization. Our sincere thanks to all faculty members and staff of NRC on Meat for enriching our meat science knowledge through constant interaction and support. We thank all other people whom we no longer properly remember who have contributed materials and ideas for writing this book. Finally, we are heartfully thankful to our all the family members for their constant support and encouragement to complete this arduous task.

**A.R. Sen**  
**M. Muthukumar**  
**B.M. Naveena**

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