



# indigenous meat products of india

India can boast of as one of the largest repository of traditional meat products in the world due to its varied culture, languages, ethnicity. It is also due to the availability of variety of locally grown raw materials (animals, spices, herbs etc), climate and geographical differences among the different regions/ states of the country. It is not possible to include all such products / preparations in one title but about 60 popular products from different regions of the country are presented with their details. This title is unique since it contains a large variety of popular indigenous meat products of India with their recipe, processing /preparation methodology, approximate composition, shelf life and sensory quality.

Common cook books which are mainly written by the renown chefs and passionate cooks. However, this title is completely different because of differences in approach in presenting the materials. It is an amalgamation of scientific writing and cook book writing. It will be useful for people working in the food service industries, food science and technology labs, food processing industry and for people interested in cooking Indian specialty products / preparations. People engaged in food products development for marketing will also find this title a useful reference. Therefore, it is expected to be used by people of Indian subcontinent as well as in other parts of the world.

#### Dr. Prabhat Kumar Mandal Misc Phil

Professor, Department of Livestock Products Technology Rapiv Gandhi Institute of Veterinary Education and Research Kurumbaper, Pondicherry, India

Dr. Ashim Kumar Biswas, HVSc, PhD Senior Scientist, Division of Post-Harvest Technology ICAR-Central Avian Research Institute Izatnagar, Bareily, India

#### Dr. Uttam Kumar Pal, MSc. PhD

Professor & Head, Department of Livestock Products Technology Rajiv Gandhi Institute of Veterinary Education and Research Kurumbaper, Pondicherry, India

#### Dr. S.Kasthuri

Assistant Professor (Contract)
Department of Livestock Products Technology
Rajiv Gandhi Institute of Veserinary Education and Research
Kurumbapet, Pondicherry, India



#### International Books and Periodicals Supply Service

38 Nishant Kunj, Main Road Pitampura, Delhi-110 034 (India) Phone No. 011 - 27352078, 9810146811

e-mail: hkjain1975@yahoo.com

Exclusive Distributed by:

Satish Serial Publishing House, Delhi-110 033



## indigenous Prabhat Kumar Mandal **Ashim Kumar** meat pro Ω **Uttam Kumar Pal** S. Kasthur





### indigenous meat products of india

Prabhat Kumar Mandal Ashim Kumar Biswas Uttam Kumar Pal S. Kasthuri



#### COLLEGE OF AVIAN SCIENCES & MANAGEMENT KVASU CAMPUS, THIRUVAZHAMKUNNU

date last given below	w.		
9		•	

# Indigenous Meat Products of India

#### Authors:

#### Dr. Prabhat Kumar Mandal, MVSc, PhD

Professor, Department of Livestock Products Technology Rajiv Gandhi Institute of Veterinary Education and Research Kurumbapet, Pondicherry, India

#### Dr. Ashim Kumar Biswas, MVSc, PhD

Senior Scientist, Division of Post-Harvest Technology ICAR-Central Avian Research Institute Izatnagar, Bareily, India

#### Dr. Uttam Kumar Pal, MVSc, PhD

Professor & Head, Department of Livestock Products Technology Rajiv Gandhi Institute of Veterinary Education and Research Kurumbapet, Pondicherry, India

#### Dr. S. Kasthuri, MVSc

Assistant Professor (Cotract)
Department of Livestock Products Technology
Rajiv Gandhi Institute of Veterinary Education and Research
Kurumbapet, Pondicherry, India



#### International Books & Periodical Supply Service

(Publisher of Scientific Books)
38, NISHANT KUNJ, PITAM PURA MAIN ROAD
DELHI-110034 (India)

Phone: 011-27352078, Mobile: 09810146811, E-mail: hkjain1975@yahoo.com

Published by:

#### International Books & Periodical Supply Service

(Publisher of Scientific Books) 38, NISHANT KUNJ, PITAM PURA MAIN ROAD DELHI-110034 (India)

Phone: 011-27352078, Mobile: 09810146811, E-mail: hkjain1975@yahoo.com

© Publisher

ISBN 978-93-88892-39-1

© 2020. All rights reserved, no part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise without the prior written permission of the publisher and also the copyright rights of the printing, publishing, e-book of this edition and subsequent editions will vest with the publisher. All Computer floppies, CD's, e-book and in any other form relating to this book will be exclusive property of the publisher.

This book contains information obtained from authentic and highly regarded sources. Reasonable efforts have been made to publish reliable data and information, but the publisher cannot assume responsibility for the validity of all materials or the consequences of their use. The publisher have attempted to trace and acknowledge the copyright holders of all material reproduced in this publication and apologize to copyright holders if permission and acknowledgements to publish in this form have not been obtained. If any copyright material has not been acknowledged please write and let us know so that we may rectify it.

Composed, Designed & Printed in India

#### About the Authors.

Dr. Prabhat Kumar Mandal born in 1967, got BVSc & AH from BCKV, Kolkata, in 1991 and did his MVSc & PhD majoring in Livestock Products Technology from IVRI in 1993 & 1996. He joined as Assistant Professor in September 1996 in RIVER, Pondicherry and elevated to Professor from March, 2011. He worked as Visiting Professor in Seoul during 2008 to 2010. Dr. Mandal is Editor-in-Chief of International Journal of Meat Science since 2009. Presently, Dr. Mandal is Editor-in-Chief of Journal of Meat Science published by IMSA and Journal of Food & Nutrition Research. Dr. Mandal is engaged in teaching and research on Meat Science and Technology since 25 years. Dr. Mandal has more than 185 publications including 52 research papers and 10 books. He is a fellow of Indian Meat Science Association and Indian Poultry Science Association.

Dr. Ashim Kumar Biswas born in 1978, got BVSc & AH from WBUAFSc, Kolkata in 2000, and MVSc (in 2002) and PhD (in 2005) from IVRI, Bareilly, India. He joined as Assistant Professor in SKUAST-Jammu in 2005, and then GADVASU, Ludhiana in 2007. He joined as Senior Scientist at ICAR in 2012. Dr. Biswas worked in muscle biology, food safety, proteome analysis and processing of health oriented meat products. He is recipient of DST Young Scientist Award, NAAS Associate Award and Fellow Recognition by IPSA, India. He is acting as Associate Editor in three meat related Journals of international repute.

Dr. Uttam Kumar Pal born in 1960, got BVSc & AH from BCKV, Kolkata in 1983 and did his PhD majoring in Meat Technology from IVRI in 1990. He worked as Scientist for about 6 years in ICAR, India and then joined as Associate Professor in October, 1996 in RIVER, Pondicherry. He is engaged in teaching and research on Meat Science and Technology since 30 years. He was the Founder Secretary of Indian Meat Science Association (2001 to 2013) and Associate Editor (2003-2013) of Journal of Meat Science published by IMSA. Dr. Pal has more than 120 publications including 60 research papers and 4 books.

Dr. Kasthuri Segar was born in 1989, in Puducherry. She got BVSc&AH in 2013 from Rajiv Gandhi Institute of Veterinary Education and Research (RIVER) and MVSc in Livestock Products Technology (LPT) from the same institute in 2016. She worked on "development and storage of functional chicken chips using natural additives" for master thesis. Since January 2017, she is working as Assistant Professor in the Department of LPT, RIVER. She is handling UG classes, training farmers on milk products processing and supervising production of ready-to-eat poultry products. She has 3 research papers, one book chapter, one training manual, one best paper award and one best oral presentation award.

### Preface

Due to diversity in tradition, ethnicity and culture among different communities in India, there has been an emergence of a large variety of indigenous meat products over the years. As such the literature on traditional meat products of India or their documentation is scanty. To our knowledge there is no single title available which documents indigenous meat products of India scientifically, hence, this title is expected to fill this gap. This book is prepared by compiling the information collected from different parts of India on location specific indigenous meat products and preparations including the scientific literature available in the field. Further, our knowledge and expertise acquired in the long working experience in the area is used to make the title both scientific and user friendly. The title includes the processing/preparation techniques, recipe, approximate nutritional fact, storage life and sensory aspects of such products.

India can boast of being one of the largest repositories of traditional meat products in the world due to its varied culture, languages, ethnicity, availability of abundant variety of locally grown raw materials (animals, spices, herbs, etc.), climate and geographical differences among the different regions/states of the country. It is not possible to include all such products/preparations in one title but the popular products (about 60) from different regions of the country are presented with their details as stated earlier.

It is completely a different title because of differences in approach in presenting the materials unlike common cook books which are mainly written by renown chefs and passionate cooks. It is an amalgamation of scientific writing and cook book writing which is supposed to be useful for people working in the food service industries, food science and technology labs, the food processing industry and for people interested in cooking exotic and specialty products/preparations. People engaged in food products development for marketing will also find this title as a useful reference. Due to globalization, there is huge migration of the Indian Diaspora all over the world who may find this title useful. Further, there is increasing demand for the indigenous meat products of India in other countries due to their delicious flavour. Therefore, it is expected to be useful for people of the Indian subcontinent as well as other parts of the world.

### Contents \_\_\_\_\_

Abo	ut ti	he Authorsv
Prefi	ace.	vii
Cha	pte	er 1: Basics of Meat and Meat Cookery
	1.	Introduction1
	2	Meat quality and characteristics
,	3	Meat handling, storage and food safety practices7
	4.	Meat cookery
ļ	5	Indigenous meat preparations12
•	6.	Common names of Indian food ingredients/spices in English and Hindi14
	7,,	Common cooking related terminology15
;	8.	Photographs of some common Indian spices & ingredients
Cha	pte	er 2: Mutton/Chevon Preparations
	1.	Mutton curry23
	2.	Kochi panthar jhol26
,	3.	Mutton korma28
	4,	Galouthi kebab30
,	5.	Seekh kebab33
	6.	Rogan josh
ı	7.	Shami kebab38
;	8.	Lamb curry40
	9.	Nate yakni44
ŀ	10.	Mutton chukka47
	11.	Mutton dopiaza

	12.	Mutton fry55
	13.	Mutton kosha
	14.	Rista
	15.	Gushtaba66
	16.	Tabak maaz69
	17.	Aab Gosh
	18.	Nihari
	19.	Boti Kebabs77
	20.	Mutton/Chevon keema79
Ch	apte	er 3: Pork Preparations
	1.	Sorpotel83
	2.	Gahori with bastenga87
	3.	Pork vindaloo
	4.	Pork anishi93
	5.	Galho96
	6.	Pork pickle98
	7.	Smoked pork with bamboo shoot101
	8.	Goan sausage103
Ch	apte	er 4: Chicken Preparations
	1	Butter chicken
	2,	Chicken chettinadu112
	3.	Chicken fry
	4.	Chicken shammi kebab117
	5.	Chicken tabaka
	6.	Chicken korma
	7.	Chicken pish-pash125
	8.	Chicken tikka Masala
	9.	Dum ka chicken 130
	10.	Gongura chicken
	11	Chilli chicken 125

	12.	. Chicken-65	137
	13.	. Chicken pickle	141
		. Tandoori chicken	
	15.	. Malabar chicken curry	147
	16.	. Chicken croquettes	149
	17.	. Chicken gizzard pickle	152
		. Tandoori quail	
		. Quail meat pickle	
		-	
Ch	apte	er 5: Miscellaneous Meat-based Preparations	
	1.	Chicken biryani	161
	2	Chicken khichuri	166
	3.	Chicken murukku	169
	4.	Chicken Haleem	171
	5.	Chicken roll (Kathi Roll)	175
	6.	Pongsen	
	7.	Xacuti	
	8.	Kerala beef roast	183
	9.	Chicken pulao	185
	10	. Chicken momos	
	11	. Tandoori chicken momos	191
		. Chicken samosa	
	13	3. Dried meat	195