

# **Livestock Farming, Development (Sheep, Pig, Goat, Rabbit), Poultry Farming, Animal, Cattle & Poultry Feed, Fodder, Fisheries and Aquaculture, Fish, Meat, Pork Processing**

**Modern Technology of Food Processing & Agro Based Industries(Confectionery,Bakery,Breakfast Cereal Food,Dairy Products, Sea Food, Fruits & Vegetable Processing) with Project Profiles (3rd Revised Edition)**

**Author:** NIIR Board of Food Technologists

**Format:** Paperback

**Book Code:** NI10

**Pages:** 688

**ISBN:** 9789381039823

**Price:** Rs. 1,775.00 US\$ 150.00

Developing competitive agro-industries is crucial for generating employment and income opportunities. It also contributes to enhancing the quality of, and the demand for, farm products. Agro-industries have the potential to provide employment for the rural population not only in farming, but also in off-farm activities such as handling, packaging, processing, transporting and marketing of food and agricultural products. Food processing & agriculture based industry is important from the point of view of contribution to industrial production and employment generation. The food sector has emerged as a high-growth and high-profit sector due to its immense potential for value addition, particularly within the food processing industry. The agriculture processing sector has the vast potential in the development of an economy through its multiplier effect. This handbook contains processes formulae, manufacturing method of various products, brief profiles of various projects which can be started and providing information regarding land area cost, project cost plant & machinery cost etc. It contains Photographs of Plant & Machinery with Supplier's Contact Details and Plant Layout and Process Flow Sheets. The major contents of the book are Biotechnological Applications in Dairy Industry, Packaging of Orange Squash in Rigid Plastic Containers, Quality Assurance for Food Products, Canning of Vegetables, Cocoa Butter, Chewing Gums, Confectionery Manufacturing Process, Corn Flakes and Starch, Dairy Products, Dehydration of Fruit & Vegetables, Extruded Sugar Products, Fish Canning and Processing, Fruit Beverages, Fruit Juices, Squashes and Cordials, Honey, Ice Cream, Jam, Jellies & Marmalades, Pickles, Chutneys & Sauces, Preservation Fruits and Vegetables, Sugar Candy & Confectionery etc. This publication is an outcome of contributions from project consultants, engineers and food technologists aimed at highlighting the manufacturing project details. It is expected that the information presented in this handbook will help everyone who wants to startup as entrepreneur.

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## [Handbook on Fisheries and Aquaculture Technology](#)

**Author:** NIIR Board of Consultants and Engineers

**Format:** Paperback

**Book Code:** NI101

**Pages:** 750

**ISBN:** 8178330792

**Price: Rs. 1,100.00 US\$ 125.00**

The fishery sector is important from Indian economy view point as it contributes a source of income to a number of fishermen and has huge export potential. The systems and technology used in aquaculture has developed rapidly in the last fifty years. They vary from very simple facilities like family ponds for domestic consumption in tropical countries to high technology systems like intensive closed systems for export production. Much of the technology used in aquaculture is relatively simple, often based on small modifications that improve the growth and survival rates of the target species. Nowadays, the fish and fisheries industry is one of the fastest growing international commodity markets globally. Guaranteeing an adequate supply to this international market requires hundreds of thousands of fishing vessels and fish farms, as well as tens of thousands of fish processing workers, wholesalers and retailers in countries spread all over the world. The fishery sector thus generates employment and income for millions of people and in one of the major fields to venture. A wide range of aspects of fresh water aquaculture such as selection of species of fish and shellfish, construction and preparation of various types of fish ponds, control of aquatic weeds and predators, production of seed fish and their transportation, fish nutrition and fish diseases and their control pertaining to composite fish culture, air breathing fish culture etc. have been dealt with a length for easy adoption. The major contents of the book are classification of fishes, general characters of fishes, techniques in fish identification, cold water fisheries of India, physical and chemical properties of fishery water, chemical constituents of fish, economic importance of fishes, fish in relation to human health, construction of fish farms, etc. In this book you can find all the basic information required on the fundamental aspects of the fisheries and aquaculture technology with detailed information of their applications a wide variety of industrial processes etc. The book is very useful for research scholars, technocrats, institutional libraries and entrepreneurs who want to enter into the field of aquaculture technology.

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**[Rabbit, Goat, Sheep, Poultry, Fish and Pig Farming with Feed](#)**

# Technology

**Author:** NIIR Board

**Format:** Paperback

**Book Code:** NI127

**Pages:** 564

**ISBN:** 8178330202

**Price:** Rs. 1,100.00 **US\$** 125.00

Livestock and poultry in Indian tropical and subtropics play a critical role in agricultural economy by providing milk, wool, meat, eggs and draft power and provide flexible reserves during period of economic stress and buffer against crop failure. Rabbits are raised up off the ground and are one of the cleanest animals produced as meat and hence do not even need to be wormed. Rabbits are among the most productive of domestic livestock, making them efficient sources of food for an ever increasing population with diminishing resources. Up to 98.7% of the rabbits can be used for meat, fur, in laboratories, as fertilizers, in toys and novelties. The large demand for animal wool seems to be assured. Sheep rearing is the major source of livelihood to small and marginal farmers and landless laborers in hilly areas, arid and semi-arid region of India. Goat is a multi functional animal and plays a significant role in the economy and nutrition of landless, small and marginal farmers in the country. It creates employment to the rural poor besides effectively utilizing unpaid family labor. There is ample scope for establishing cottage industries based on goat meat and milk products and value addition to skin and fiber. Fish is a good source of animal proteins; Man has realized its importance from the very inception of the evolution of the human race. It has been the sole diet for many island nations before the evolution of farming techniques. Poultry is one of the fastest growing segments of the agricultural sector in India today. The production of agricultural crops has been rising at a rate of 1.5 to 2 % per annum that of eggs and broilers has been rising at a rate of 8 to 10 % per annum. From a backyard hobby it has culminated into an industry. Among the various livestock species, piggery is most potential source of meat production and more efficient feed converters after the broiler. Apart from providing meat, it is also a source of bristles and manure. Pig farming will provide employment opportunities to seasonally employed rural farmers and supplementary income to improve their living standards. The contribution of pork products in terms of value works out to 0.80% of total livestock products and 4.32% of the meat and meat products. This book basically deals with rabbit keeping, feeding systems, feed requirements and balanced rations, angora wool utilization in cottage industries, useful information for goat breeding

measures of increasing potential of range land nutrients requirements of goats, conversion efficiency of indigenous breeds of goats, sources and functions of the nutrients in sheep, breeds of poultry, inheritance of plumage in turkeys, commercial poultry farming, nutrition of broiler type chickens, how to economise on poultry feed cost, principles of fish culture, culturable fish and shellfish, nutritional requirement and artificial shrimp feed preparation, types of antibiotics for pigs etc. This book provides detailed information on the livestock and poultry farming and rearing technique with described process of feeding systems, feed requirements and balanced rations, harvesting commercial products from them. This book is an invaluable resource for the entrepreneurs, institutions and professionals.

**Importers Directory of Food, Beverages & Tobacco Products (World Wide /International Buyers Database) 3rd Edition**

**Format:** CD-Rom

**Book Code:** NID63

**Price:** Rs. 4,307.00 **US\$** 150.00

ABOUT: Today much of the world's economy is based on the ability of countries to import and export goods to each other. This global economy is vital to allowing the exchange of technology and goods and relies upon a network of importers and exporters to ensure that goods can flow freely and be available to meet the ever growing demand of the public. In order to keep track of the most reputable importers, we have created Database of Importers. Perhaps no other question is asked more frequently by exporters than "Where and how can I find importers?? Database of Importers is a perfect starting point for international exporters, manufacturers, traders and merchants looking to establish direct contacts with overseas customers. This Directory contains the latest and complete information about your potential business partners in several countries. The importers information listed in Buyers Directory has been collected from very reliable sources like electronic media, embassies and different association of concerned countries .Having in view the export promotional programme, our dedicated team has compiled Buyers Directory with hard work, efforts and devotion. The Directory contains the most comprehensive database of importer information. We at NPCS collect data from around the world, and then classify the raw data into the kind of intelligent categories that companies around the world use to:

- Find new importers, new markets and new business opportunities
- Enhance international trade
- Support sales & marketing.

Importers Directory of Food, Beverages & Tobacco Products (World Wide /International Buyers Database) 3rd Edition (Food Products, Dairy Products, Beverages, Milk, Chocolates, Cereal, Wheat, Bakery Products, Biscuit, Noodles, Pasta, Starch, Vegetables, Canned Food, Frozen Food, Seafood, Pulses, Spices, Pickles, Sauces, Fruits, Sugar, Juices, Honey, Eggs, Meat, Beer, Vinegar, Guar Gum, Wine, Soft Drink, Cigarettes, Liquor, Alcohol) Contains: Over 6,300 Importers / Foreign Buyers. Details include Company's Name, Contact Person (4,400), Address (6,200), Phone (6,300 Landline/ Mobile), E-Mail (3,400), Fax (4,500), Website (1,000) and Product Description. Note: All Records does not contain all fields of information. However, maximum information has been incorporated. Format: MS Excel, .xls

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## [Preservation of Meat and Poultry Products](#)



**Author:** NIIR Board of Consultants & Engineers

**Format:** Paperback

**Book Code:** NI158

**Pages:** 544

**ISBN:** 817833030X

**Price:** Rs. 1,100.00 **US\$** 125.00

Food preservation is a method of maintaining foods at a desired level of properties or nature for their maximum benefits. Preservation usually involves preventing the growth of bacteria, yeasts, fungi, and other micro-organisms (although some methods work by introducing bacteria, or fungi to the food), as well as retarding the oxidation of fats which cause rancidity. There are various methods of preservation chilling, freezing, curing, smoking, dehydration, canning, radiation preservation etc. Chilling is most widely used method for preservation for short term storage of meat because chilling or refrigeration slows down the microbial growth and enzymatic as well as chemical reactions. Freezing is the method of choice for the long term preservation of meat. It has advantage of retaining most of the nutritive value of meat during storage. Meat smoking was known to man as an aid in preservation for a long time. Smoke contains a large number of wood degradation products such as aldehydes, ketones, organic acids, and phenols etc. which exert bacteriostatic affect besides imparting characteristic smoky flavour. Canning is a process of preservation achieved by thermal sterilization of product held in hermetically sealed containers. Canning preserves the sensory attributes such as appearance, flavour and texture of the meat products to a large extent. Freeze drying of meat is a satisfactory process of dehydration preservation due to better reconstitution properties, nutritive quality and acceptability. It involves the removal of water from the frozen state to vapour state by keeping it under vacuum and giving a low heat treatment. Maintaining or creating nutritional value, texture and flavour is an important aspect of food preservation, although, historically, some methods drastically altered the character of the food being preserved. Meat and poultry products are chilled immediately after slaughter to acceptable internal temperatures which insure the prompt removal of the animal heat and preserve the wholesomeness of the products. As such, due to the recent up gradation of preservation techniques, the preservation industry is also growing almost at the same rate as the food industry which is about 10 to 12% per year. Some of the major aspects of the book are principles of various preservation techniques, standards and quality control measures for meat, meat food products order, eating quality and sensory evaluation of meat, preservation of

poultry meat, utilisation of poultry industry by products, mixed poultry by products meal, structure, composition and nutritive value of eggs, luncheon meats, meat loaves, and meat spreads, barbecue style pork loaf using non fat dry milk, canned corned beef products, salisbury steak with textured vegetable protein, general instruction to be observed for processing canned items under steam or under the combination of steam and water pressure, spaghetti and meat balls in tomato sauce with cheese, etc. Different preservation techniques are being developed to satisfy current demands of economic preservation and consumer satisfaction in nutritional and sensory aspects, convenience, absence of preservatives, low demand of energy and environmental safety. The present book contains various processes of meat and poultry preservation. All the entrepreneurs, technocrats, persons evolved in meat and poultry processing will be benefited from this book.

# [The Complete Book on Meat Processing and Preservation with Packaging Technology](#)

**Author:** NIIR Board of Consultants & Engineers

**Format:** Paperback

**Book Code:** NI162

**Pages:** 540

**ISBN:** 9788178330310

**Price:** Rs. 1,275.00 US\$ 125.00

Meat was originally processed to preserve it, but since the various procedures cause so many changes in texture and flavour it is also a means of adding variety to the diet. Processing also provides scope to mix the less desirable parts of the carcass with lean meat and in addition is a means of extending meat supplies by including other foodstuffs such as cereal in the product. Food preservation is a method of maintaining foods at a desired level of properties or nature for their maximum benefits. Preservation usually involves preventing the growth of bacteria, yeasts, fungi, and other micro organisms (although some methods work by introducing bacteria, or fungi to the food), as well as retarding the oxidation of fats which cause rancidity. Today, meat is processed with salt, colour fixing ingredients, and seasonings in order to impart desired palatability traits to intact and comminuted meat products. Products intermediate to these categories are sectioned, or chunked and formed meats. There are various methods for the preservation of meat; curing, dry curing, smoking, canning, freezing dehydration, fat extraction (wet or steam rendering), etc. Meat curing agents include sodium chloride, nitrite, ascorbate or erythorbate and possibly sodium phosphate, sucrose, dextrose, or corn syrup and seasonings. The salt content of processed meats varies 1 to 12%, according to the type of product. Many intact and comminuted, cured meat products are smoked to impart a desirable smoked flavour and colour. The smoking process many also include a drying or cooking cycle, depending on the product. Canned meats may be processed to be commercially sterile or semi preserved. The objective of commercial sterilization is to destroy all harmful bacteria or bacteria that may cause spoilage of the product under normal unrefrigerated storage. However, the process does not kill the spores of all heat resistant bacteria. Frozen meat can be kept at low temperatures for many months. Freezing and subsequent thawing produce changes in the structure of meat that affect its physical properties. If meat is frozen very rapidly at low temperatures, the ice crystals are small and form within the fibers. The drip loss upon thawing is generally greater in slow frozen than in quick frozen meat. Freeze drying meat extends shelf life and reduces weight. The meat is readily defrosted by immersing in water before cooking. Under optimum processing and storage conditions, reconstituted

meats have acceptable flavour, colour, texture and nutrient retention. The meat packing industry handles the slaughtering, processing, packaging, and distribution of animals such as cattle, pigs, sheep and other livestock. The basic purpose of packaging is to protect meat and meat products from undesirable impacts on quality including microbiological and physio chemical alterations. Packaging protects foodstuffs during processing, storage and distribution from contamination by dirt (by contact with surfaces and hands), microorganisms (bacteria, moulds, and yeasts), parasites (mainly insects), toxic substances (chemicals), influences affecting colour, smell and taste (off odour, light, oxygen), loss or uptake of moisture. As such, due to the recent up gradation of preservation techniques, the preservation industry is also growing almost at the same rate as the food industry which is about 10 to 12% per year. Some of the fundamentals of the book are meat product, simultaneous flavouring and tenderizing, synthetic flavouring, preservation: moisture retention and surface protection, antimicrobial treatment, antioxidant application to freeze dried meats, packaging and handling for storage and transportation, continuous steam cooking of ground meat, activators of natural proteolytic enzymes, isotonic enzyme solution with specific activity, inactivation of enzymes with high pressure, etc. The origin of meat processing is lost in antiquity but probably began when primitive humans first learned that salt is an effective preservative and that cooking prolongs the keeping quality of fresh meat. This book includes the processing of fresh meats, the different curing agents, method of curing, smoking and manufacturing of various meat products such as sausages, canned meat, cured and smoked meats etc. The book is very useful for entrepreneurs, technocrats and those who want to venture in to this field.

# The Complete Technology Book on Meat, Poultry and Fish Processing (2nd Revised Edition)

**Author:** NPCS Board of Consultants & Engineers

**Format:** Paperback

**Book Code:** NI202

**Pages:** 512

**ISBN:** 9788190568548

**Price:** Rs. 1,475.00 US\$ 150.00

India is endowed with the largest livestock population in the world. Livestock and poultry in Indian tropical and sub tropics play a critical role in agriculture economy by providing milk, meat, eggs etc and provide flexible reserves during period of economic stress and buffer against crop failure. Mutton and Chicken is an important livestock product which in its widest sense includes all those parts of the animals that are used as the food by the man. So, with increase in population there is also an increasing consumer demand for food products that are low in fat, salt and cholesterol at local, national and international levels. Food manufacturers need to be able to produce meat, poultry and fish products which are considered to be healthy and that can meet the consumer demands. Meat industry, although is a very developing stage in India, is the top food industry in the world. Processed meat products are poised for continuous growth in the country. Poultry is one of the fastest growing segments of the agricultural sector. The main aim of this book is to provide complete guide on meat, fish and poultry processing. Owing to the wide variety of products and type of processes and treatments (curing, dry curing, fermentation, cooking smoking etc), this products need particular analytical methodologies for proper consumption. It examines the nutritional principles behind the drive for reductions in fat, salt and cholesterol in our diet, and illustrates formulations and procedures utilized to produce such products. The reader would get to explore brief discussion regarding the Indian meat industry followed by the next chapter which includes structure, composition and nutritive value of meat tissues, postmortem changes and some meat quality parameters are also added in the preceding chapters. It also discuss about meat cutting and packaging, processing of meat and meat products, microbial and other deteriorative changes in meat and their identification, chemical composition and nutritive value of poultry meat, pre slaughter handling, transport and dressing of poultry, fish products, freezing fish fillets, miscellaneous fish dishes, spreads, salads, loaves fish spreads for appetizers, sandwiches, shellfish and miscellaneous marine products, meat removal and pre freezing treatment, packing and freezing, classes and sizes of fresh and frozen oysters, freezing whole raw lobsters etc. The book contains manufacturing processes of various meat, chicken and fish

products in much illustrative manner. Special content on machinery equipment photographs along with supplier details has also been included. It is anticipated that, it turns out to be a resourceful book for entrepreneurs, technocrats, food technologists and others linked with this industry; as this would be an invaluable reference source for meat, poultry and fish processors, and food industry personnel involved in the development and marketing of new products.



# [Handbook on Pig Farming and Pork Processing \(Feeding Management, Breeding, Housing Management, Sausages, Bacon, Cooked Ham with Packaging\)](#)

**Author:** NPCS Board of Consultants & Engineers

**Format:** Paperback

**Book Code:** NI302

**Pages:** 272

**ISBN:** 9789381039786

**Price:** Rs. 1,075.00 **US\$** 125.00

Pig farming is the raising and breeding of pigs. Among the various livestock species, piggery is most potential source for meat production and pigs are more efficient feed converters after the broiler. Pig rearing has traditionally been in the main occupational axis of the socially backward down-trodden class of Indian population since time immemorial. But at present commercial pig farming has greatly changed social scenario of this business in India. Now everyone is conscious about the economic importance of pig farming. Pig farming for meat production is one of the best and profitable business ideas for people. There are several highly meat producing pig breeds available and Initial requirements of small investment, quick returns and utilization of bristles and manure further increase the importance of this animal. This handbook is designed for use by everyone engaged in the pork production. The book explains about how to raise and care for pigs, by choosing the right breed, how to house, feed and breed them, butchering process, manufacturing process of various pork products and sample plant layouts & process flow sheets with machinery details. Major contents of the book are behavior of pigs, feeding management, pig breeding, housing management, diseases, pork processing, sausages, bacon, cooked ham, chilling and freezing of meat, meat packaging. It will be a standard reference book for professionals, food technologists, entrepreneurs, and others interested in startup of pig farming and pork production.

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## About NIIR

**NIIR PROJECT CONSULTANCY SERVICES (NPCS)** is a reliable name in the industrial world for offering integrated technical consultancy services. NPCS is manned by engineers, planners, specialists, financial experts, economic analysts and design specialists with extensive experience in the related industries.

Our various services are: Detailed Project Report, Business Plan for Manufacturing Plant, Start-up Ideas, Business Ideas for Entrepreneurs, Start up

Business Opportunities, entrepreneurship projects, Successful Business Plan, Industry Trends, Market Research, Manufacturing Process, Machinery, Raw Materials, project report, Cost and Revenue, Pre-feasibility study for Profitable Manufacturing Business, Project Identification, Project Feasibility and Market Study, Identification of Profitable Industrial Project Opportunities, Business Opportunities, Investment Opportunities for Most Profitable Business in India, Manufacturing Business Ideas, Preparation of Project Profile, Pre-Investment and Pre-Feasibility Study, Market Research Study, Preparation of Techno-Economic Feasibility Report, Identification and Section of Plant, Process, Equipment, General Guidance, Startup Help, Technical and Commercial Counseling for setting up new industrial project and Most Profitable Small Scale Business.

NPCS also publishes various process technology, technical, reference, self employment and startup books, directory, business and industry database, bankable detailed project report, market research report on various industries, small scale industry and profit making business. Besides being used by manufacturers, industrialists and entrepreneurs, our publications are also used by professionals including project engineers, information services bureau, consultants and project consultancy firms as one of the input in their research.

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