

**Agriculture, Agro Based, Bakery, Wood, Ice cream,  
Chocolate Cereal Food, Confectionery, Dairy,  
Farming, Fisheries, Food & Beverages, Fruits,  
Meat, Milk, Oils & Fats, Snacks, Spices,  
Vegetables, Flowers, Rice, Wheat, Corn, Tobacco  
and Tobacco Products**

**[Modern Technology Of Milk Processing & Dairy Products \(4th Edition\)](#)**

**Author:** NIIR Board

**Format:** Paperback

**Book Code:** NI9

**Pages:** 550

**ISBN:** 9788190568579

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

The dairy industry plays an important role in our daily life. It is difficult to realize how fast changes are taking place in the dairy industry. Milk is an important human food, it is palatable, easy to digest and highly nutritive. One of the important factors affecting the total amount of milk produced and the way in which this milk is utilized is the demand for the various products. In order to prepare such a diversity of products, many different processes have been developed by the industry. There are numerous types of milk products such as ghee, butter, paneer, cheese, yogurt, ice cream powder, baby cereal food, cream, and so on. Each of these has been designed to take advantage of some particular property of milk. Dairy products are generally defined as food produced from the milk of mammals; they are usually high energy yielding food products. Enzymes play an important role in the production of cheese. Raw milk contains several native enzymes some of which can be used for analytical and quality purposes for example pasteurization can be assessed by determining indigenous alkaline phosphate activity. India is known as the Oyster of the global dairy industry, with opportunities galore to the entrepreneurs globally. Anyone might want to capitalize on the largest and fastest growing milk and milk products market. The dairy industry in India has been witnessing rapid growth. The liberalized economy provides more opportunities for MNCs and foreign investors to release the full potential of this industry. The main aim of the Indian dairy industry is only to better manage the national resources to enhance milk production and upgrade milk processing using innovative technologies. The major contents of the book are cholesterol, coronary heart disease and milk fat, cholesterol and cardio vascular diseases, fatty acids & cholesterol, factors affecting cardio vascular disease, application of enzymes in dairy and food processing, utilisation of milk components: casein, advances in the heat treatment of milk, varieties of sheep's cheese, whey cheese, potted cheese, filled cheese, testing butter at different stages, presentation of butter at different stages, condensed and evaporated milk, dried milk powder, skimmed powder, malted powder, butter powder, ghee yoghurt, technology processing of dairy and dairy products, dried milk shake, milk powder, dahi from sweet cream butter milk, packaging of dairy and milk products, dairy farm, dairy products & milk packaging in

pouches, etc. Developments in the dairy industry are enough to justify a revision of a considerable amount of material in this book. This book deals with processes, formulae, project profiles, details of plant, machinery & raw materials with their resources etc. of various dairy products. This book will help all its readers from entrepreneurs to food industries, technocrats and scientists.

**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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## **Modern Technology of Agro Processing & Agricultural Waste Products**

**Author:** NIIR Board

**Format:** Paperback

**Book Code:** NI11

**Pages:** 504

**ISBN:** 8186623493

**Price:** Rs. 975.00 US\$ 100.00

Agriculture being a foundation stone for most budding economies, it would be benefiting to know about agro processing and waste management of agriculture produce. The book will act as an encyclopaedia for enriched information on the processing of a variety of products manufactured from agro crops and the waste management of agriculture products. Agro processing can be defined as set of techno economic activities carried out for preservation and treatment of agricultural produce and to make it useful as food, feed, fibre, fuel or manufacturing objects . Therefore, the span of the agro-processing industry covers all operations from the phase of harvest to the phase where the material reaches the end users in the desired form, packaging, quantity, quality and price. Agro processing is a complex process and a clear understanding will certainly help to grow your business. The agro processing is functional to all the produces, originating from agricultural farm, livestock, aqua cultural sources and forests for their preservation, treatment and value-addition to make them serviceable as food, feed, fibre, fuel or industrial raw materials. The book deals with varied information on the agro product like Quality Parameters of Dehydrated Fruits and Vegetables, Fruit Specific Preservation Technologies, General Properties of Fruits and Vegetables; Chemical Composition and Nutritional Aspects; Structural Features. Some chapters provide information on the various by products of agro products like Alcohol from Potatoes, Activated Carbon from Saw Dust, Rice Husk and Coconut Shells, Cattle Feed from Molasses, Bio coal Briquettes from Agriculture Cellulosic Waste, Maize Processing for Glucose etc. The book also gives a touch to the growth of agro processing Industries in India that has experienced expansion during last 5 decades, starting with a handful of facilities to the present level. The book in addition contains the number of products made from agricultural waste. With the current expansion and growth of agro processing and the waste management the book will render you comprehensive information on the project profiles, requirements of basic infrastructure like plant, machinery and raw materials and the addresses of their suppliers. Agro processing has recently emerged as the dawn sector of the Indian economy with its enormous prospective for growth and direct assistance to economic aspect especially on

employment and income generation. A number of estimates propose that in developed countries, up to 14 per cent of the total labour force is engaged in agro-processing sector directly or indirectly. Though, in India, a meagre number of 3 per cent of the work force finds employment in this sector revealing its underdeveloped state and vast untapped potential for employment. The book will provide you comprehensive information to tap the opportunities available in the sector.

# Handbook on Agro Based Industries (2nd Revised Edition)



**Author:** NPCS board

**Format:** Hardcover

**Book Code:** NI12

**Pages:** 179

**ISBN:** 9789381039120

**Price:** Rs. 1,595.00 **US\$** 150.00

\*\*\*\*\*Limited Edition- available in Photostat Version

Only\*\*\*\*\* Agro based industry refers to an industry that adds values to agricultural raw materials through processing in order to produce marketable and usable products that bring forth profits and additional income to the producer. The development of the agro industry can help stabilize and make agriculture more lucrative and create employment opportunities both at the production and marketing stages. The broad based development of the agro products industry will improve both the social and physical infrastructure of India. India is one of the largest producers of food, and is the second largest producer of rice, wheat, fruits, and vegetables in the world. Nearly 70% of the population depends on agriculture and agro-based industries. Since it would cause diversification and commercialization of agriculture, it will thus enhance the incomes of farmers and create food surpluses. It is a well recognized fact across the world, particularly in the context of industrial development that the importance of agro industries is relative to agriculture increases as economies develop. It should be emphasized that food is not just produce. Food also encompasses a wide variety of processed products. It is in this sense that the agro-industry is an important and vital part of the manufacturing sector in developing countries and the means for building industrial capacities. The development of agro-based industries commenced during pre-independence days. Cotton mills, sugar mills, jute mills were fostered in the corporate sector. During the post-Independence days, with a view to rendering more employment and using local resources, small scale and village industries were favored. It is the second-largest producer of food in the world and spends more than a quarter of its expenditure on food and related items. Agriculture services attracted foreign direct investment (FDI) worth US\$1440 million (INR 69,124.8 million). Indian food industry is estimated to grow from the present US\$181 billion (INR 8688 billion) to US\$318 billion (INR 15264 billion) by 2020. The food processing sector in India has potential of attracting US\$33 billion (INR1, 584 billion) of investments in 10 years and generates employment of 9 mn person days. The content of the book includes information about rubber. The major contents of this book are project profiles of projects like Agro Based Industries, Aloe Vera Juice, gel & Powder, Banana Powder, Charcoal Powder from Rice Husk, Coconut Oil,

Disposable Plates from Banana Leaves, Drumstick Powder, Dry Lemon, Lemon Powder and Lemon Oil, Extraction of Ultra Pure Silicon from Rice Husk, Fruit Processing Ginger Products, Maize and Its Products, Mango Pickles, Potato Powder and Flakes , Rice Bran Oil. Project profile contains information like introduction, properties, uses, raw material, manufacturing process, process flow diagram, plant economics, land and building, fixed capital, working capital/month, total working capital/month, cost of project, turn over/annum, profit sales ratio, rate of return, breakeven point (B.E.P). This book is very useful for new entrepreneurs, technical institutions, existing units and technocrats.

# Manufacture of Food & Beverages (2nd Edn.)

**Author:** NPCS board

**Format:** Hardcover

**Book Code:** NI14

**Pages:** 189

**ISBN:** 9789381039113

**Price:** Rs. 1,895.00 **US\$** 150.00

\*\*\*\*\*Limited Edition- available in Photostat Version

Only\*\*\*\*\* The Food and Beverages Industry is one of the leading industrial and business segments across the world, extending over a vast chain of production, distribution and retail lines. It is the mainstay of the much of the industrial and economic activities going around the world. The food industry is a complex, global collective of diverse businesses that supply much of the food and food energy consumed by the world population. Only subsistence farmers, those who survive on what they grow, can be considered outside of the scope of the modern food industry. The beverage industry refers to the industry that produces drinks. Beverage production can vary greatly depending on which beverage is being made. The food processing is one of the most under development almost exploited segment of agriculture industry. Food processing is the set of methods and techniques used to transform raw ingredients into food or to transform food into other forms for consumption by humans either in the home or by the food processing industry. Baking is the traditional technique of prolonged cooking of food by dry heat acting by convention. Bakery product, bread products, biscuit products, and other products are a major growth area. Food preservation is one of the major parts of food processing. The Indian food industry was estimated at over \$182 billion, accounting for about two-thirds of the country's total retail sector. Expected growth of food industry is to grow \$300 billion by 2015 and by 2025, it is expected to be worth \$344 billion. Consumption of non-alcoholic beverages is expected to increase by 16.5-19% over the next three years as more people are trading up to packaged drinks. Corporate manufacturers of non-alcoholic beverages are expected to grow at an annual rate of 16.5% and non-corporate manufacturers at 19%. The estimates are based on an assumed gross domestic product growth of 7%, which is much higher than the 5% growth. The content of the book includes information about food and beverages. The major contents of this book are project profiles of projects like Food Industry, Beverage Industry, Beer, Biscuit, Bread, Chocolate Drinks (Liquid Form), Corn Flakes, Date Syrup, Date Paste, Date Jam & Date Drinks, Health Drink, Indian Made, Foreign Liquor, Lychee Juice, Packaged Drinking Water, Potato Powder, Flakes and Granules with Cold storage, Soft Drink (Aerated), Sugarcane Juice in Tetra Pack, Tomato

Concentrate & Ketchup, Wine from Grape. Project profile contains information like introduction, properties, B.I.S specification, uses and applications, manufacturing process, manufacturing process flow diagram, plant and economics, land and building, plant and machinery, fixed capital, working capital requirement/month, total working capital/month, cost of project, total capital investment, turn over/annum, profit sales ratio, rate of return, breakeven point (B.E.P). This book is very useful for new entrepreneurs, technical institutions, existing units and technocrats.

# Profitable Agro Based Projects with Project Profiles (Cereal Food Technology) (2nd Revised Edition)

**Author:** P.K.Chattopadhyay

**Format:** Hardcover

**Book Code:** NI15

**Pages:** 216

**ISBN:** 9789381039168

**Price: Rs. 1,895.00 US\$ 150.00**

\*\*\*\*\*Limited Edition- available in Photostat Version

Only\*\*\*\*\* Cereal, also called grain, any grass yielding starchy seeds suitable for food. The cereals most commonly cultivated are wheat, rice, rye, oats, barley, corn (maize), and sorghum. As human food, cereals are usually marketed in their raw grain form (some are frozen or canned) or as ingredients of various food products; as animal feed, they are consumed mainly by livestock and poultry, which are eventually rendered as meat, dairy, and poultry products for human consumption; and they are used industrially in the production of a wide range of substances, such as glucose, adhesives, oils, and alcohols. Real processing, treatment of cereals and other plants is to prepare their starch for human food, animal feed, or industrial use. Cereals are used for both human and animal food and as an industrial raw material. Although milled white flour is largely used for bread production, especially in industrialized countries, the grain may be converted to food in other ways. The relatively minor use of cereals in nonfood products includes the cellulose in the straw of cereals by the paper industry, flour for manufacturing sticking pastes and industrial alcohol, and wheat gluten for core binders in the casting of metal. Rice chaff is often used as fuel in Asia. Assuming a 50 percent increase in fertilizer use and that 41.5 percent of the cropped area is irrigated; projected 2020 food production would increase by 7.2 percent - from 251.0 million tons to 269.1 million tons. Future increases in the production of cereals and non-cereal agricultural commodities will have to be essentially achieved through increases in productivity, as the possibilities of expansion of area and livestock population are minimal. To meet the projected demand in the year 2020, country must attain a per hectare yield of 2.7 tons for rice, 3.1 tons for wheat, 2.1 tons for maize, 1.3 tons for coarse cereals, 2.4 tons for cereal, 1.3 tons for pulses, 22.3 tons for potato, 25.7 for vegetables, and 24.1 tons for fruits. The content of the book includes information about cereal food technology. The major contents of this book are project profiles of projects like rice milling, rice products, rice flake (poha) and utilities of storage and preservation techniques of food grains, flour milling, wheat and flour products, maize processing, the dry milling of corn, rice starch, corn products, white oat processing, nutrition labeling, requirements of plant and machinery and address of plant and machinery suppliers. This book is very useful for new

entrepreneurs, technical institutions, existing units and technocrats.



# Detailed Project Profiles on Dairy & Dairy Products (2nd Edn.)

**Author:** NPCS board

**Format:** Hardcover

**Book Code:** NI16

**Pages:** 163

**ISBN:** 9789381039106

**Price: Rs. 1,495.00 US\$ 150.00**

\*\*\*\*\*Limited Edition- available in Photostat Version

Only\*\*\*\*\* A dairy is a business enterprise established for the harvesting of animal milk mostly from cows or goats, but also from buffaloes, sheep, horses or camels – for human consumption. A dairy is typically located on a dedicated dairy farm or in a section of a multi-purpose farm (mixed farm) that is concerned with the harvesting of milk. The farm area where milk is stored in bulk tanks is known as the farm's "milk house." Milk is then hauled (usually by truck) to a "dairy plant," also referred to as a "dairy", where raw milk is further processed and prepared for commercial sale of dairy products. Dairy plants process the raw milk they receive from farmers so as to extend its marketable life. Two main types of processes are employed: heat treatment to ensure the safety of milk for human consumption and to lengthen its shelf-life, and dehydrating dairy products such as butter, hard cheese and milk powders so that they can be stored. A dairy product or milk product is food produced from the milk of mammals. Dairy products are usually high energy-yielding food products. A production plant for the processing of milk is called a dairy or a dairy factory. Apart from breastfed infants, the human consumption of dairy products is sourced primarily from the milk of cows, water buffaloes, goats, sheep, yaks, horses, camels, domestic buffaloes, and other mammals. India is making efforts for strengthening the dairy sector through various development schemes like Intensive Dairy Development Programme, Strengthening Infrastructure for Quality & Clean Milk Production, Assistance to Cooperatives and Dairy Entrepreneurship Development Scheme. The share of value added dairy products (VADP) in the milk and milk derivatives segment is expected to grow by around 25 per cent till 2019-20, the Indian dairy industry has shown constant growth in milk production as well as per capita milk availability, i.e., 51.4 million tonne to about 127 million tonne and 291 gm/day respectively. With current growth the rate of approximately 3%-4%, it is thought to grow to 185 million tonne and become a \$24 billion (Rs 1, 44,000 crore) organized industry by 2020 and \$140 billion (Rs 8, 40,000 crore) including the unorganized sector. However our research considers the same production levels by 2022-23. The content of the book includes information about dairy and dairy products. the major contents of this book are project profiles of projects like dairy

industry, dairy processing 22, dairy packaging 32, organic dairy farming 39, casein from milk 43, cheese analogue 51, chocolate and confectionary 61, dairy farming & packing of milk 75, ice-cream of different flavours 90, milk chilling plant 106, hut milk plant 119, yogurt 136. Project profile contains information like uses and applications, properties, B.I.S specification, manufacturing process, flow diagram, plant economics, , land and building, plant and machinery, fixed capital, working capital requirement/month, total working capital/month, cost of project, total capital investment, turn over/annum, profit sales ratio, rate of return, breakeven point (B.E.P). This book is very useful for new entrepreneurs, technical institutions, existing units and technocrats.

# Profitable Farming & Allied Projects (2nd Revised Edition)

**Author:** NPCS board

**Format:** Hardcover

**Book Code:** NI17

**Pages:** 195

**ISBN:** 9789381039137

**Price: Rs. 1,495.00 US\$ 150.00**

\*\*\*\*\*Limited Edition- available in Photostat Version

Only\*\*\*\*\* Livestock farming is raising animals for food or to sell and is very well planned. Livestock animals play an important role in rural economic development. Some of these animals include cattle or dairy cows, chickens, goats, pigs, sheep, etc. India is the second largest market worldwide and aquaculture contributes 1.5 per cent to the gross domestic product (GDP), Livestock gives us meat, eggs and milk apart from using the skins and hair of some animals for blankets, clothing, and brushes. Manure from these animals will be used to make plants grow better. Poultry farming is raising chickens for meat or eggs and India is the fourth largest market worldwide in poultry. Dairy farms are farms where cows are raised to make milk and milk products like cheese, ice cream, butter and whipping cream. Today, poultry raising and dairy farming are big business. India has a high potential in the sheep industry and also a very diverse genetic resources through which, if scientifically bred the production in sheep industry can be enhanced. India is endowed with livestock resources of vast genetic diversity and accounts for about 11 per cent of the world livestock population. The country boasts of 55 per cent of the world buffalo population, 20 per cent of the goat population and 16 per cent of the cattle population in the world. India has the second rank with respect to goat and sheep world population. Indian exports of live animals like sheep and goat over the years continued to dominate with a registered growth of 9.98 per cent over the last three years. The government is making concerted efforts to tap the vast export potential of the country huge livestock population. The content of the book includes information about farming. The major contents of this book are project profiles of projects like Livestock Farming, Angora Rabbit Farming, Rabbit Feed, Yarn from Wool, Manufacturing of Shawls, Sweaters, Caps, Mufflers with Dyeing & Bleaching, Beekeeping, Honey Processing and Packaging, Dairy Farming and Milk Products, Egg Powder, EMU Birds, Gelatin from Bones, Integrated Sericulture, Milk Processing Plant, Pig Farming, Piggery/Meat/Chicken Processing, Poultry Farming, Goat and Sheep Farming, Shrimp Farming. Project profile contains information like introduction, properties, uses and applications, method, process flow diagram, process, plant economics, land and building, plant and machinery, fixed capital, working capital requirement/month, total working capital/month,

cost of project, total capital investment, turn over/annum, rate of return, breakeven point (B.E.P). This book is very useful for new entrepreneurs, technical institutions, existing units and technocrats.

# Detailed Project Profiles On Plantation (Agro Based Projects)

**Author:** Ajay Kumar Gupta

**Format:** Hardcover

**Book Code:** NI18

**Pages:** 166

**ISBN:** 8186623027

**Price:** Rs. 1,095.00 US\$ 100.00

\*\*\*\*\*Limited Edition- available in Photostat Version

Only\*\*\*\*\* A plantation is a long, artificially-established forest, farm or estate, where crops are grown for sale, often in distant markets rather than for local on-site consumption. The term plantation is informal and not precisely defined. Plantations are developed on a large scale as the crops are grown for commercial purposes, not for local consumption. A plantation is always a monoculture over a large area and does not include extensive naturally occurring stands of plants that have economic value. Because of its large size, a plantation takes advantage of economies of scale. Protectionist policies and natural comparative advantage have contributed to determining where plantations have been located. Industrial plantations are established to produce a high volume of wood in a short period of time for each society. Plantations are grown by state forestry authorities (for example, the Forestry Commission in Britain) and/or the paper and wood industries and other private landowners. The plantation depends on a plentiful supply of cheap labor, not in the sense that its cost is low in relation to its productivity but in the absolute sense that wages are low because skills are few. For the plantation derives whatever economic advantage it has from its ability to mobilize unskilled labor to achieve greater economic return. Under certain circumstances the plantation, either private or public, enjoys distinct economic advantages over other types of farm organization. When it is desirable to introduce a new technology requiring a radical change in cultural practices, the plantation substitute's supervision—supervisory and administrative skills—for skilled, adaptive labor, combining the supervision with labor whose principal skill is to follow orders. India has a long tradition of floriculture. Rose is the principal cut flower grown all over the country, even though in terms of total area, it may not be so. The larger percentage of the area in many states is used for growing scented rose. More than two thirds of this large area is devoted for production of traditional flowers, which are marketed loose e.g. marigold, jasmine, chrysanthemum, aster, tuberose etc. Mushroom is an exotic and nutritious source of vegetarian food. It is a major horticulture product all over the world and is also becoming popular in India. Fresh mushrooms have very limited shelf life but dried and packed mushrooms have considerable shelf life. The content of the book includes information about plantation. The major contents of this book are project profiles of projects like teak



plantation, eucalyptus tree plantation, cut flower (rose), mushroom (cultivation and processing unit), papaya cultivation, rubber plantation, Shisham plantations, Amla plantations, tea plantations. Project profile contains information like introduction. Uses and applications, market survey, supplier's addresses, plant economics, land and building, plant and machinery, other fixed assets, fixed capital, working capital requirement/annum, salary and wages/annum, utilities and overheads, total working capital/annum, cost of projects, total capital investment, cost of production/annum profit, rate of return, B.E.P. This book is very useful for new entrepreneurs, technical institutions, existing units and technocrats.

# Handbook on Fruits, Vegetables & Food Processing with Canning & Preservation (3rd Edition)

**Author:** NPCS Board

**Format:** Paperback

**Book Code:** NI19

**Pages:** 688

**ISBN:** 9788178330839

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

Natural foods such as fruits and vegetables are among the most important foods of mankind as they are not only nutritive but are also indispensable for the maintenance of the health. India is the second largest producer of fruits and vegetables in the world. Fertile soils, a dry climate, clean water and abundant sunlight help the hard working farmers to produce a bountiful harvest. Although there are many similarities between fruits and vegetables, there is one important difference that affects the way that these two types of crop are processed like fruits are more acidic than vegetables. Food processing is the set of methods and techniques used to transform raw ingredients into food or to transform food into other forms for consumption. Food processing typically takes clean, harvested crops or butchered animal products and uses these to produce attractive, marketable and often long shelf-life food products. Canning is a method of preserving food in which the food is processed and sealed in an airtight container. Food preservation is the process of treating and handling food to stop or greatly slow down spoilage (loss of quality, edibility or nutritive value) caused or accelerated by micro organisms. One of the oldest methods of food preservation is by drying, which reduces water activity sufficiently to prevent or delay bacterial growth. Drying also reduces weight, making food more portable. Freezing is also one of the most commonly used processes commercially and domestically for preserving a very wide range of food including prepared food stuffs which would not have required freezing in their unprepared state. Fruits and vegetable processing in India is almost equally divided between the organized and unorganized sector, with the organized sector holding 48% of the share. The present book covers the processing techniques of various types of fruits, vegetables and other food products. This book also contains photographs of equipments and machineries used in fruits, vegetables and food processing along with canning and preservation. This book is an invaluable resource for new entrepreneurs, food technologists, industrialists etc.

# Handbook on Spices

**Author:** NIIR Board

**Format:** Paperback

**Book Code:** NI20

**Pages:** 416

**ISBN:** 8178330946

**Price:** Rs. 975.00 **US\$** 100.00

Ever since the commencement of civilization India has been the world's most preferred destination of spices. The variety and nature of spices available in India makes the country to stand out of the crowd in the international arena. Undoubtedly the country is one of the leading producers and exporters of spices in the world. Getting proper information on this sector of the economy is sure to benefit many budding entrepreneurs. Featured as one of the best sellers the Handbook on Spices is a book for all those thinking of penetrating into the sector and will act as an additional sources of information that are in this line of trade. The book has covered more than 55 spices produced in the country some of which are Black Pepper, Cardamoms, Ginger, Turmeric, Chillies, Vanilla, Tamarind, Coriander, Cumin seeds, Fenugreek, Dill, Garlic, and Onion etc. Along with the list of spices it also provides information on climatic conditions and soil type required for these spices, the planting requirements, the storage condition, composition, uses, the botanical aspect and the varieties of the product available. The chapter on spices will also provide you information about the Diseases and Pests from which the spices have to be protected, wherever required the basis of grading of the spice is also mentioned. The chapters also deal in the quality improvement in Spices by the Solar Drying, Quality Standards for Ajowan Seed and its Powder, Value added Exportable Products from Spice. The spices demand have increased a lot in the world on account of fact that there has been increasing inhabitation of Indian community in developed countries and recently developed taste for Indian delicacies in the international forum. With different climates in different parts of country, India has the potential to produce a variety of spices. Thus the spice market is having a lot of future prospects. This book inculcates the wide-range of information on cultivation and processing of main spices and condiments of India which have been playing imperative role in the development and growth of national economies of several spices producing, importing and exporting countries. This book will be helpful for new entrepreneurs, spice growers, technologists and those who are already in the spice production and are looking to expand further in the present line.

# The Complete Technology Book on Snack Foods (2nd Revised Edition)

**Author:** Dr. Himadri. Panda

**Format:** Paperback

**Book Code:** NI57

**Pages:** 544

**ISBN:** 9789381039243

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

Snacking is becoming a way of life with many people. In some countries the average eating frequency is around 6 to 7 occasions per day. There are plenty of marketing niches and slots to be filled in the Snack food areas. Snack is a type of food not normally eaten as a main meal such as breakfast, lunch or dinner but to mitigate hunger between these meals. Snack may also be consumed between meals purely for the enjoyment of its taste. Traditionally snacks were prepared from leftovers or ingredients easily available at home and included sandwiches, nuts, fruits etc. They have become more appealing than prepared foods and contain tempting, flavourful ingredients. This book attempts to provide the processes for the manufacture of various Snack food items which has tremendous domestic and export market. It covers a variety of subjects from snack food emphasizing the evolving nature of snacks in our diet. Whether you are new to the field or you are pro facing broader responsibilities, Snack Food Processing provides valuable information gained through first-hand experience. It provides a clear, comprehensive overview of the Snack Food Processing which contains definitive content on developing, preparing, and processing various types of snack foods. The initial content is regarding snack food ingredients and the work progresses to discuss various types of snacks with processes in subsequent chapters, detailing their development, production and consumption, raw material requirement and flow chart. Detailed discussion on technical functions that includes product development followed by quality control and nutritional supplementation has also been included. Some chapter covers packaging, extrusion and other technologies of snack food manufacturing process. Special content on machinery equipment photographs along with supplier details has also been included. It is for people who want a technical based practical review on how snack foods are made. We hope that this book will meet every individual need who has thrust to explore technology on snack food processing. New entrants into the field will be able to confidently communicate with suppliers and associates. Managers and quality control personnel will gain a better idea on where to start in solving problems when they arise.

**The Complete Technology Book on Bakery Products (Baking Science with Formulation & Production)3rd Edition**

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

**Format:** Paperback

**Book Code:** NI61

**Pages:** 672

**ISBN:** 9789381039380

**Price:** Rs. 1,675.00 US\$ 150.00

Baking is a food cooking method that uses prolonged dry heat by convection, rather than by thermal radiation. Heat is gradually transferred "from the surface of cakes, cookies and breads to their centre. As heat travels through it transforms batters and dough into baked goods with a firm dry crust and a softer centre". Bakery products have become essential food items of the vast majority of population. The present day consumer looks for new bakery products, better appeal, taste and convenience from bakery foods. Bakery industry has also an important role in popularizing wheat in non-wheat consuming region of the World. With good planning and access to good staff, raw materials and markets, setting up a bakery can represent an excellent enterprise opportunity. The book is invaluable reading for those starting their own baking business or any baker looking to improve their existing business in order to increase profits. The book covers various aspects related to different bakery products with their manufacturing process and also provides contact details of raw material, plant and machinery suppliers with equipment photographs and their technical specifications. It provides a thorough understanding of the many new developments shaping the industry and offers detailed technical coverage of the manufacturing processes of bakery products. It examines the nature of bakery products, the role of the ingredients in determining their quality, processing methods and their control. Various bakery products covered in the book are wheat ingredients, other grain ingredients, shortenings, emulsifiers, antioxidants, water and salt, different types of breads and biscuits, cakes, buns, icings, production of cookie and cracker, spices, flavours, colors, leavened and unleavened products, air-leavened products, chemically leavened bread and rolls, chemically leavened sweet goods, Yeast-leavened plain bread, rolls, dough, preservation of bakery products, milk and egg ingredients, fruits, vegetables, nuts and many more. Food Mixer, Cookie Extruder, Rotary Oven, Biscuit Sandwiching Machine, Tunnel Gas Oven, Flour Mixer, Cookies Rotary Moulder, Bun Divider Moulder, Planetary Mixer, Spiral Mixer, Pillow Packing Machine, Oil Spray Machine are the various equipments described in the book with their photographs and technical specifications. The book aims to provide comprehensive information on different types of bakery products. The book is aimed for food



technologist, scientists, research scholars, as well as for new entrepreneurs and those who are engaged in this industry.

# [The Complete Technology Book on Dairy & Poultry Industries With Farming and Processing \(2nd Revised Edition\)](#)

**Author:** NIIR Board

**Format:** Paperback

**Book Code:** NI62

**Pages:** 720

**ISBN:** 9789381039083

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

Dietary habits of people have changed over the last few decades. Growing consciousness for protein rich food has given an impetus to both the dairy industry and poultry farming. Today, the dairy industry is a large organized sector with both private and government participation whereas poultry farming has indicated a rapid growth of 20% in the past few decades as well. 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. The venture has largely been entrepreneurial and poultry farmers prefer to target their efforts to breeding & broiler farming for sale of ready broilers or layer farming for eggs. Poultry is the second most widely eaten meat in the world, accounting for about 30% of meat production worldwide. Dairy plants process the raw milk they receive from farmers so as to extend its marketable life. India has only a few specialized dairy farms. It is the production that characterizes the dairy industry. India is the worlds highest milk producer and all set to become the worlds largest food factory. Dairying is an important source of subsidiary income to small/marginal farmers and agricultural labourers. The manure from animals provides a good source of organic matter for improving soil fertility and crop yields. Since agriculture is mostly seasonal, there is a possibility of finding employment throughout the year for many persons through dairy farming. Thus, dairy also provides employment throughout the year. The main beneficiaries of dairy programmes are small/marginal farmers and landless labourers. Developments in the dairy and poultry industries during the last decade have been important enough to bring out a considerable amount of materials on dairy and poultry farming; processing of milk and poultry related products. The major contents of the book are dairy farming, poultry production, breeding, fertility, forage grass and concentrates, cow behaviour and health, manufacture of butter and cheese, process measurements and controls, components of poultry diets etc. This book also describes about the feed manufacturing process, butter and cheese manufacturing processes with diagrams, housing system and management of broilers and more. The first book of its kind which covers

complete details of dairy and poultry farming, processing how to feed cows, birds in dairy and poultry, kind of diseases and their cure and other information related farming. This book will be an invaluable resource to dairy and poultry technology, institutions and for those who want to venture in this field.

**The Complete Technology Book on Processing, Dehydration,  
Canning, Preservation of Fruits & Vegetables (3rd Revised Edition)**

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

**Format:** Paperback

**Book Code:** NI65

**Pages:** 576

**ISBN:** 9789381039694

**Price: Rs. 1,875.00 US\$ 150.00**

Fruits and vegetables are important sources of vitamins, minerals and dietary fibre. The consumption of fruits and vegetables has increased significantly as consumers have become more health-conscious. Whilst most fruit and vegetables should be eaten fresh, processed fruit and vegetables can be acceptable alternatives. Fruit and vegetables have many similarities with respect to their compositions, methods of cultivation and harvesting, storage properties and processing. Processing (canning, Dehydration & Preservation) increases the shelf life of fruits and vegetables. Fruits and vegetables are processed into a variety of products such as juices and concentrates, pulp, canned and dehydrated products, jams and jellies, pickles and chutneys etc. The extent of processing of fruits and vegetables varies from one country to another. The technology for preservation also varies with type of products and targeted market. Owing to the perishable nature of the fresh produce, international trade in vegetables is mostly confined to the processed forms. India is the second largest producer of fruits & vegetables in the world with an annual production of million tonnes. It accounts for about 15 per cent of the world's production of vegetables. Due to the short shelf life of these crops, as much as 30-35% of fruits and vegetables perish during harvest, storage, grading, transport, packaging and distribution. Hence, there is a need for processing technology of fruits and vegetables to cater the domestic demand. The major contents of the book are procedures for fruit and vegetable preservation, chemical preservation of foods, food preservation by fermentation, preservation by drying, canning fruits, syrups and brines for canning, fruit beverages, fermented beverages, jams, jellies and marmalades, tomato products, chutneys, sauces and pickles, vegetables preparation for processing, vegetable juices, sauces and soups, vegetable dehydration, freezing of vegetables etc. The book also contains photographs of Production Line & Machinery. It will be a standard reference book for professionals, entrepreneurs, food technologists, those studying and researching in this important area and others interested in the field of fruits and vegetables processing.

# Modern Technology Of Oils, Fats & Its Derivatives (2nd Revised Edition)

**Author:** NIIR Board

**Format:** Paperback

**Book Code:** NI68

**Pages:** 576

**ISBN:** 9788178330853

**Price:** Rs. 1,875.00 US\$ 150.00

Until recently fats and oils have been in surplus, and considered a relatively low value byproduct. Only recently have energy uses of fats and oils begun to be economically viable. Food value of fats and oils is still far above the energy value of fats and oils. Industrial and technical value of fats and oils is still above the energy value of fats and oils. Animal feeds value of fats and oils tends to remain below the energy value of fats and oils. With development of new technology oils and fats industry has undergone a number of changes and challenges that have prompted the development of new technologies, and processing techniques. Oils and fats constitute one of the major classes of food products. In fact oils and fats are almost omnipresent in food processing – whether naturally occurring in foods or added as ingredients for functional benefits and, despite the impression given by several sources to the contrary; they remain an essential part of the human diet. However, it is increasingly apparent that both the quantity and the quality of the fat consumed are vital to achieve a balanced diet. They are essential constituents of all forms of plant and animal life. Oils and fats occur naturally in many of our foods, such as dairy products, meats, poultry, and vegetable oil seeds. India is the biggest supplier of greater variety of vegetable oil and still the resources are abundant. The applications of oils are also seen in paints, varnishes and related products. Since the use of oils and fats in our daily life is very noticeable the market demands of these products are splendid. Special efforts has been made to include all the valuable information about the oils, fats and its derivatives which integrates all aspects of food oils and fats from chemistry to food processing to nutrition. The book includes sources, utilization and classification of oil and fats followed by the next chapter that contain details in physical properties of fat and fatty acids. Exquisite reactions of fat and fatty acids are also included in the later chapter. It also focuses majorly in fractionation of fat and fatty acids, solidification, homogenization and emulsification, extraction of fats and oils from the various sources, detail application in paints, varnishes, and related products is also included. It also provides accessible, concentrated information on the composition, properties, and uses of the oils derived as the major product followed by modifications of these oils that are commercially available by means of refining, bleaching and



deodorization unit with detailed manufacturing process, flow diagram and other related information of important oils, fats and their derivatives. Special content on machinery equipment photographs along with supplier details has also been included. We hope that this book turns out to be considerate to all the entrepreneurs, technocrats, food technologists and others linked with this industry.

# The Complete Technology Book on Starch and Its Derivatives

**Author:** H. Panda

**Format:** Paperback

**Book Code:** NI81

**Pages:** 540

**ISBN:** 8178330733

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

Starch is a group of poly saccharides, composed of glucopyranose units joined together by glucosidic linkages. Starch is also metabolized for energy in plants and animals, and is used to produce a large number of industrial products. Starch is processed to produce many of the sugars in processed foods. The biggest industrial non food use of starch is as adhesive in the paper making process. Other important fields of starch application are textiles, cosmetic and pharmaceutical uses. Starch can be obtained from maize, sorghum, roots and tubers such as tapioca, arrow root, potatoes etc. Starch truly serves as a multifunctional ingredient in the food industry. Starch is one of the most present biomaterials has witnessed significant developments over the years. By products are obtained in the manufacture of different types of starch such as maize gluten has a number of interesting possible uses in industry, zein (by product of corn processing) is used in the preparation of stable glass like plastics, modification of zein is used as adhesives and in the preparation of coating compositions for paper, the most important by product from wheat starch manufacture is gluten which is used in preparing diabetic foods, for feeding cattle, thickening agent in textile printing and so on. The Global starch market is likely to get respite from deceleration in its market growth, with growth poised to receive a new lease of life in the next few years. This book basically illustrates about the properties, structures, manufacturing process explained with flowcharts and diagrams, applications of starch and its derivatives etc. The major contents of the book are structure and chemical properties of starch, chemical composition, molecular structure, starch granule properties, water sorption and granule swelling as a function of relative humidity, factors affecting starch paste properties, the oxidation of starch etc. This is a unique book, concise, up to date resource offering a valuable presentation of the subject. This book contains processes of starch and its derivatives. This book is an invaluable resource for new entrepreneurs, industrialists, consultants, libraries.

## Modern Technology on Food Preservation (2nd Edition)

**Author:** NPCS Board

**Format:** Paperback

**Book Code:** NI88

**Pages:** 528

**ISBN:** 9788178330716

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

Food Preservation has become an integral part of the food processing industry. There are various methods of food preservation; drying, canning, freezing, food processing etc. Food processing is one the method of food preservation which is the set of methods and techniques used to transform raw ingredients into food or to transform food into other forms for consumption by humans or animals either in the home or by the food processing industry. Canning is one of the various methods of food preservation in which the food is processed and then sealed in an airtight container. This process prevents microorganisms from entering and proliferating inside. Dehydration is the process of removing water or moisture from a food product. Food dehydration is safe because water is removed from the food. Freezing is also one of the most commonly used processes commercially and domestically for preserving a very wide range of food including prepared food stuffs which would not have required freezing in their unprepared state. Benefits of food processing include toxin removal, preservation, easing marketing and distribution tasks, and increasing food consistency. In addition, it increases seasonal availability of many foods, enables transportation of delicate perishable foods across long distances and makes many kinds of foods safe to eat by deactivating spoilage and pathogenic micro organisms. Nanotechnology exhibits great potential for the food industry. New methods for processing nanostructures are being developed having novel properties that were not previously possible. 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. The purpose of this book is to present the elements of the technology of food preservation. It deals with the products prepared from various fruits and vegetables commercially. Relevant information on enzymes, colours, additives, flavours, adulteration, etc., has been given. This book also contains photographs of equipments and machineries used in food preservation. This book will be very useful for new entrepreneurs, food technologists, industrialists, libraries etc.

# Food Packaging Technology Handbook (2nd Revised Edition)

**Author:** NIIR Board

**Format:** Paperback

**Book Code:** NI93

**Pages:** 749

**ISBN:** 9789381039090

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

Food packaging technology is primarily concerned with packaging activities regarding protection of food products from biological, physical or chemical agents. With the growth of modern civilization, people are getting more concerned with hygiene and quality of the food. As a result of that, food packaging is gradually setting up its stand to contend with other industries. The importance of food packaging hardly needs emphasizing since only a handful of foods are sold in an unpackaged state. Packaging is the science, art, and technology of enclosing or protecting products for distribution, storage, sale, and use. Packaging also refers to the process of design, evaluation, and production of packages. Packaging can be described as a coordinated system of preparing goods for transport, warehousing, logistics, sale, and end use. Packaging contains, protects, preserves, transports, informs, and sells. With an increasing focus on sustainability and cost effectiveness, responsible companies no longer want to over package their food products, yet many remain unsure just where reductions can effectively be made. In near future it is going to be a booming industry. Food packaging can functionally be subdivided into five parts, which are containment, protection, communication, functionality, environmental and safety issues. The packaging industry's growth has led to greater specialization and sophistication from the point of view of health and environment friendliness of packing material. The demand on the packaging industry is challenging, given the increasing environmental awareness among communities. The food packaging industry is growing at the rate of 22 to 25 per cent per annum. In near future it is going to be a booming industry. This book majorly deals with food adulteration and food quality control, strategy for achieving, success in food packaging, packaging materials for processed foods, food additives, trend of carbonated and still beverage spoilage, examination of canned foods, international food packaging, standard related to food safety, aseptic packaging of foodstuffs, computer aided graphic design in food packaging, thermal process determination, designing of thermal process for low acid foods, modified atmosphere packaging etc. Along with these features the book also encloses the description of equipments and machineries used in food processing and preservation with diagrams. This book also contains photographs of

equipments and machineries used in food packaging. This book gives comprehensive account of food packaging, which is the most important part to preserve the food for a long time. The present volume has been written primarily for the benefit of new entrepreneurs, technologists, technical libraries and for those who want to diversify in the field of food industry.

# Food Colours, Flavours and Additives Technology Handbook

**Author:** NIIR Board

**Format:** Paperback

**Book Code:** NI94

**Pages:** 626

**ISBN:** 8186623760

**Price:** Rs. 1,000.00 **US\$** 100.00

Colour and flavour variation in foods throughout the seasons and the effects of processing and storage often make colour addition commercially advantageous to maintain the colour expected or preferred by the consumer. People associate certain colours with certain flavours, and the colour of food can influence the perceived flavour in anything from candy to wine. For this reason, food manufacturers add these dyes to their products. Sometimes the aim is to simulate a colour that is perceived by the consumer as natural. Food colouring is a substance, liquid or powder, which is added to food or drink to change its colour. Food colouring is used both in commercial food production and in domestic cooking. Due to its safety and general availability, food colouring is also used in a variety of non food applications. Flavourings are focused on altering or enhancing the flavours of natural food product such as meats and vegetables, or creating flavour for food products that do not have the desired flavours such as candies and other snacks. Most types of flavourings are focused on scent and taste. Few commercial products exist to stimulate the trigeminal senses, since these are sharp, astringent, and typically unpleasant flavours. Flavourant is defined as a substance that gives another substance flavour, altering the characteristics of the solute, causing it to become sweet, sour, tangy, etc. Flavours and flavour enhancers will remain the largest segment; while alternative sweeteners grow the fastest. Food additives are substances added to food to preserve flavour or enhance its taste and appearance. Food additives are used during production, processing, treatment, packaging, transportation or storage of food. The present day food industry has grown and flourished due to the liberal use of food additives. These additives have also led to the extensive production and marketing of easy to prepare convenience foods. The natural food colour industry market is growing at 10% to 15% annually. The global flavour industry can be characterized as highly technical, specialized, and innovative. This industry is highly competitive and concentrated, compared to other product categories within the food and beverage market. The global flavours market is predicted to grow at a Compound Annual Growth Rate (CAGR) of 2% per annum. In this twenty first century, mankind has developed a technology to retain the original value of food by adding additives, flavours



and colours, which also increase the taste of food. This book basically deals with food colorimetry, synthetic colours used food, manufacture of synthetic organic colours for food, analysis of synthetic food colours, synthetic dyes, aluminium lakes, inorganic pigments, the influence of colour on sensory, perception and food choices etc. This particular publication will guide to our food technologists, agriculturists and management of planning commission to tackle their problem efficiently. This book is very useful for new entrepreneurs, professionals, research institutions, libraries, for those who want to diversify in the field of food colours, flavours and additives technology.

# Cultivation of Fruits, Vegetables and Floriculture

**Author:** NIIR Board

**Format:** Paperback

**Book Code:** NI95

**Pages:** 760

**ISBN:** 8186623752

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

Fruit and Vegetable Cultivation in India is a prominent business sector for exporting merchandise and shipping and thus earning a good amount of international revenue for India. Since its independence India has been trying keep pace with the dazzling prospects of exporting commercial business. India is essentially agrarian and rural, with ample scope for lands for farming and cultivation and it has also helped for the cultivation of a large variety of fruits as well as vegetables. The study of fruit and vegetable production is a subject of enormous scope. It involves the integration of wide spectrum of disciplines. As the new technologies and developments become available, cropping system and production practices changes. India has perhaps been renamed as the vegetable and fruit basket in the world, a factor that weighs fascinatingly upon the cultivation of fruits in the country. India serves as the home to various kinds of vegetable as fruits, and holds a vital position in the field of productions of fruits and vegetables amidst different countries of the world. Floriculture covers all the aspects related to the production and use of flowers and ornamental plants, flower seeds, bulbs etc. The scenario of floriculture is changing fast due to steadily widening export opportunities and large number of people earns their livelihood. Commercial floriculture however is of recent origin. A constituent increase in demand for cut and potted flowers has made floriculture as one of the important commercial trades in Indian agriculture. Floriculture has an annual growth potential of 25 to 30 percent. Of late, large scale commercial companies have started joint ventures with foreign companies to invest in the floriculture sector. The government has invited foreign investment in floriculture, particularly in the areas of refrigerated storage and transportation facilities essential to ensure that flowers do not perish to transit. Cultivation of fruits, vegetables and floriculture is capable of attracting/retaining a large number of progressive rural populations on in farming. This book majorly deals with integrated development of fruits, scope and importance of fruits, vegetable crops, integrated development of vegetables, floriculture, integrated development of floriculture etc. This publication deals with all the important and relevant aspects of floriculture including production technology, open cultivation in different climates. The book is written in such way that it can be used by commercial growers, home gardeners, professional floriculturists and environmentalists.

## Herbal Foods and its Medicinal Values

**Author:** H. Panda

**Format:** Paperback

**Book Code:** NI96

**Pages:** 768

**ISBN:** 8186623744

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

Food has been a basic part of our existence. Through the centuries we have acquired a wealth of information about the use of food as a part of our community, social, national and religious life. It has been used as an expression of love, friendship and social acceptance without knowing the medicinal values of such food. India is one of the leading herbal food producer and exporter in the world. Traditional use of herbal medicines is recognized as a way to learn about potential future medicines. Several meticulous researches were conducted and experimented with herbal food. They arrived at more precise conclusions about the usefulness of diverse plants and herbs that are utilized in field like medicine. Now a day people are very much aware of the ingredients in synthetic drugs, the benefits of herbal products and harmful effects of chemical ingredients. Herbal medicines are in huge demand in the developed world for health care for the reason that they are efficient, safe and have lesser side effects. The formulations based on herbs are safe and effective. Herbal plants constitute a large segment of the flora, which provide raw materials for use by various industries. They have been used in the country for a long time for their medicinal properties. The decision to cultivate medicinal herbs should only be made in response to demand for particular herbs. The market is very competitive and could easily be oversupplied. The major contents of the book are carbohydrates, chemistry of carbohydrates daily requirement of carbohydrates, proteins, chemistry of proteins, some Indian food preparations rich in proteins, dynamic action of vitamin A, absorption and excretion of vitamin A, medicinal uses of ripe mango, mango in the treatment of night blindness etc. This book for the first time reveals the exact medicinal characteristics and how it works and cures the different disease to make mankind healthy. This book is very useful for scientists, doctors, scholars as well as entrepreneurs.

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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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## [Food Flavours Technology Handbook](#)

**Author:** NIIR Board

**Format:** Paperback

**Book Code:** NI113

**Pages:** 544

**ISBN:** 818662385X

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

No doubt flavour is one of the most important attributes of the food products we eat in our daily life. Man does not eat simply to live but even more so lives to eat. Flavourings are focused on altering or enhancing the flavours of natural food product or creating flavour for food products that do not have the desired flavours for example bakery goods and other snacks. Flavour is generally defined in terms of three components; odour, taste and texture. Its characterization is concern with the similarities in human flavour perception using methods that designed to average out the differences. The flavour of foods may be classified as natural flavour (pre existing in diet particularly in fruits, vegetables and spices), process flavour (arising in end products as a result of conventional processes), compounded flavour (intentionally added flavouring), taste modifiers and abnormal taste and taints. Some of the flavouring materials produced by processing are chocolate, cheese, blue cheese, yogurt, wine, aroma chemicals etc. The flavour industry has become a vital element in the growth and success of food and beverage industries worldwide. The flavours industry remains very country specific and complex, with product formulations and flavours varying from country to country, as well as from region to region within countries. Processed foods, their flavours and textures, are adapted to local consumer preferences. Local or traditional foods have unique flavours evolving from the indigenous climate, land, etc. Generally speaking, trends in flavours closely mirror those in the packaged food and drink market. This includes the trends toward premium quality, savoury, natural and authentic, and health and wellness. The global flavour industry can be characterized as highly technical, specialized, and innovative. This industry is highly competitive and concentrated, compared to other product categories within the food and beverage market. The global flavours market is predicted to grow at a Compound Annual Growth Rate (CAGR) of 2% per annum. This book majorly deals with flavour in fruits and vegetables, additional pathways for vegetable flavour, change in food flavour after processing, flavours formed via fermentation, odd flavours in foods, odd flavours due to chemical changes in the food, relationships between the food and flavour manufacturers, flavour characters of herbs preparation of herbs for marketing, flavour constituents of

grapes and wine, dried inactive yeast powder, synthetic flavouring materials, flavour potentiators, baked goods and bakery products, sugar and chocolate confectionery, techniques of sensory testing, fruit based products, gas chromatography, microbiological analysis The present book contains formulae, processes of various flavours applied in food and beverage industries. This book is intended to be a practical companion to the flavourist, technologists, entrepreneurs, libraries or for those who are already in the field of manufacturing.

# Cultivation of Tropical, Subtropical, Vegetables, Spices, Medicinal and Aromatic Plants



**Author:** NIIR Board

**Format:** Paperback

**Book Code:** NI119

**Pages:** 652

**ISBN:** 8186623876

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

Plant spices grown in tropical countries on small scale family farms of commercial farms, to provide foods for human or live stock, in dry or humid regions are highly abundant and taxonomically diversified. Vegetables comprise of a large number of plants, mostly annual, of which different parts like leaf, stem, flowers, fruit, root etc. are eaten. They are rich in nutrients and are essential items of a balanced diet.

Vegetables are called protective food as their consumption can prevent several diseases. Many vegetables are important items of commerce and thus can play a major role in the economic development. Generally classification of horticulture plants are based on nature of growth climatic requirement continuation of growth types of fruit parts used botanical relationship, salinity tolerance, ripening behaviour, botanical relationship, hardness or temperature tolerance, cool season vegetables, warm season vegetables, parts used as food, methods of raising, etc. Medicinal and aromatic plants are important for human health. These plants have been used from the prehistoric times to present day. These plants based medicines are consumed in all civilizations. It is believed that the herbal medicine can give good effect to body without causing side effects to human life. Besides, the usage of medical plants has been increasing as an important role that can support the economic system. The medical and aromatic plants for health are used as herbal treatments and therapies that can be new habits for culture. Medicinal and aromatic plants constitute a large segment of the flora, which provide raw materials for use by various industries. They have been used in the country for a long time for their medicinal properties. The decision to cultivate medicinal herbs should only be made in response to demand for particular herbs. The market is very competitive and could easily be oversupplied. This book majorly deals with classification of horticultural plants, classification of flowers, classification of spices, soil and climatic requirements of horticultural plants, beet root, bottle gourd, harvesting and post harvest management, poly house vegetable production in temperate regions, vegetables growing in containers, tea, performance of plants from cutting, vegetative propagation, rubber, biofertilizers in vegetable cultivation, postharvest management of tropical tuber crops, etc. This is an informative resource of the cultivation, irrigation, manuring,

fertilization, harvesting and post harvest management of tropical, subtropical, vegetables, spices, medicinal and aromatic plants. This book is useful for entrepreneurs, ayurvedic institutes, libraries and consultants.

# Tropical, Subtropical Fruits & Flowers Cultivation

**Author:** NIIR Board

**Format:** Paperback

**Book Code:** NI123

**Pages:** 600

**ISBN:** 8186623884

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

Tropical and subtropical plants grow in tropical jungles around the world. These plants often produce stunning blooms in a range of colors, and bring a unique and exotic feel to their growing environment. Although they hail from moist areas, many tropical and subtropical plants require warmth more than moisture. Some species of tropical plants are therefore quite easy to grow in warm, non tropical areas. One of the great characteristics of tropical plants is that they keep growing all season. There are thousands of tropical and subtropical fruits and flowers. The tropics have the capacity to produce large quantities of fruit and international trade is adding new kinds as rapid shipment possibilities increase. Some tropical fruits such as the banana, mango and pineapple are now as familiar as the apple and pear in temperate regions. Other examples of tropical fruits are grape, papaya, litchi, guava, coconut etc. In comparison with fruits of temperate regions, many tropical species have been much neglected in international markets. Citrus cultivation is carried out on a large scale. Citrus is grown worldwide although they are tropical plants so that most of the commercial groves are in subtropical regions. It is usually grown at sea level where sufficient moisture is readily available, or under irrigation. Any well drained soil, except an extremely sandy one, is suitable. The fruits ripen at different times of the year depending on the species and variety. There are various kind of tropical flowers; Aster (*Callistephus chinensis*), Jasmine (*Jasminum* sp.), Calendula (*Calendula officinalis*), Carnation (*Dianthus caryophyllus*), Lily (*Lilium* spp.), Narcissus (*Narcissus* spp.), Orchids and many more. Flowers require sincere, patient, soft, affectionate as well as expert handling. Most houseplants are tropical plants. That's why they do so well indoors, at temperature levels humans find comfortable in their homes, around 60 F to 90 F. More technically, tropical plants are defined as all vegetation growing in a wide band around the equator between the Tropic of Cancer and the Tropic of Capricorn. Just north and south of that band are the subtropical areas, also rich in plants of interest to our group. This book basically deals with seed propagation extraction and handling, effect of seed treatment and temperature on germination, vegetative propagation, effect of rootstocks on mineral composition, type of cutting, growth substances and season, postharvest

management of fruits and vegetables, factors affecting postharvest life of flowers, postharvest management of flowers, postharvest management of spices, postharvest management of plantation crops, control of ripening process, pelletization, transportation, storage etc. Plant propagation is an important aspect of agriculture in general and horticulture in particular. This book contains new methods for cultivation of tropical, subtropical fruits and flowers. The book is very useful for agriculture universities library, consultants, new entrepreneurs, plantation companies, farmers who wants to update their knowledge and adopt new cultivation techniques.

# 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.



## [Database/Directory of Agriculture \(Agro\) Companies in India \(4th Edition\) \[.xlsx, excel format\]](#)

**Format:** CD-Rom

**Book Code:** NID23

**Price:** Rs. 5,900.00 **US\$** 200.00

Offline Business directory is the best thing in today's business world. If you are searching for Buyers, then this Directory/Database is the perfect tool for you. By having the right business leads, you would be able to have immediate communication with prospective businesses, partners and customers through this boundless list of All India Companies in csv excel editable format (easy sorting and filtering). We offer an extensive suite of Directories/ database to assist you in reaching the right and targeted businesses and people quickly and easily. Business, B2B&Irm;, Industrial Directories, Mailing List are used for sales planning, finding Buyers, Sector, Business House and marketing research to perform business analysis. With our company database/Directory, you will have access to company list, Corporate/Leading Companies, Small & Medium Enterprises (SME), you will find a business list consisting of company contact details. We compiled list of companies in excel format to give you access to over hundred thousands of major & minor businesses and companies. From small business to Corporate Houses, our data is complete with business contact information to help you connect with the right companies or buyers. This database collection is a great resource for Buyers and those suppliers who offer their goods and services to Trade, Manufacturing industry, Companies, Corporate Houses & Industries in India. Includes: Agricultural Products, Agriculture, Farm Machine & Tools, Agro Chemicals, Dealers of Seeds, Dairy Products, Food & Agro Companies, Suppliers of Milk, Ghee, Milk Powder, Poultry Farm, Poultry Products, Dairy Plant & Equipments, Tractor Manufacturers, Dairy Equipments Manufacturers. Contains over 33,700 records. Detail Includes Name, Postal Address (33,550), Contact Person (4,200), Phone (31,450), Fax (2,900), E-mail (11,000), Website (2,600). Note: All Records does not contain all fields of information. However, maximum information has been incorporated. Format: MS Excel, .xlsx

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## [Handbook on Food Biotechnology \(Extraction, Processing of Fruits, Vegetables and Food Products\) 2nd Revised Edition](#)

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

**Format:** Paperback

**Book Code:** NI153

**Pages:** 400

**ISBN:** 9789381039816

**Price: Rs. 1,495.00 US\$ 150.00**

Modern biotechnology refers to various scientific techniques used to produce specific desired traits in plants, animals or microorganisms through the use of genetic knowledge. Since its introduction to agriculture and food production in the early-1990, biotechnology has been utilized to develop new tools for improving productivity. Biotechnology is a broad term that applies to the use of living organisms and covers techniques that range from simple to sophisticated. In contrast, modern agricultural biotechnology techniques, such as genetic engineering, allow for more precise development of crop and livestock varieties. The potential benefits of biotechnology are enormous. Food producers can use new biotechnology to produce new products with desirable characteristics. These include characteristics such as disease and drought-resistant plants, leaner meat and enhanced flavor and nutritional quality of foods. This technology has also been used to develop life-saving vaccines, insulin, cancer treatment and other pharmaceuticals to improve quality of life. It is estimated that in the next 20-30 years demand for food will increase by 70%.

Biotechnology will be key to meeting this demand. This handbook is designed for use by everyone engaged in the food technology such as fermentation, developing and testing of food and students who are pursuing their career in food biotechnology. It provides all information on modern cooking, food processing and preservation methods, juice preparation methods, etc. The major content of the book are Fermenter and Bio-Reactor Design, Development and Testing of a Milled Shea Nut Mixer, Production of Pure Apple Juice in Natural Colour, Drying of Ginger using Solar Cabinet Dryer, Roasting of Coffee Beans, Processing of Guava into Pulp Guava Leather, Processing and Preservation of Jack Fruit, Quality Changes in Banana, Processing and Quality Evaluation of Banana Natural Colour, Large Scale Separation and Isolation of Proteins, Preparation and Storage Studies on Onion-Ginger-Garlic Paste, Bitterness Development in Kinnow Juice, Effect of Incorporation of Defatted Soyflour, Gum from Ber Fruits, Juice Extraction of Aonla (*Emblica officinalis Gaertn.*) Cv. 'Chakaiya', Defatted Mucuna Flour in Biscuits, Detoxifying Enzymes, Processing Methods and Photographs of Machinery with Suppliers Contact Details. This book will be a mile stone for its readers who are new to this sector, will also find useful for professionals, entrepreneurs, those studying and researching in this important area.

## [Directory/ Database/ List of Indian Processed Food and Agro Based Industries \[.xlsx, excel format\] 4th Edition](#)

**Format:** CD-Rom

**Book Code:** NID62

**Price:** Rs. 3,835.00 **US\$** 150.00

Offline Business directory is the best thing in today's business world. If you are searching for Buyers, then this Directory/Database is the perfect tool for you. By having the right business leads, you would be able to have immediate communication with prospective businesses, partners and customers through this boundless list of Indian Processed Food and Agro Based Industries in csv excel format. We offer an extensive suite of Directories/ database to assist you in reaching the right businesses and people quickly and easily. Business Directories are used for sales planning, finding Buyers and marketing research to perform business analysis. With our company database/Directory, you will have access to company list. You will find a business list consisting of company contact details. We compiled list of companies in excel format to give you access to over hundred thousands of major & minor businesses and companies. From small business to Corporate Houses, our data is complete with business contact information to help you connect with the right companies or buyers. This database collection is a great resource for those suppliers who offer their goods and services to Indian Processed Food and Agro Based Industries like, Plant & Machinery Suppliers, Raw Material Suppliers, Packaging Material Suppliers, Office Equipment Suppliers, Office Furniture Suppliers, Mobile Companies, Advertisement Agencies, Office Stationery Suppliers, Courier Companies, IT, Software Companies, Labour Contractors, etc. Information in this database contains over 19,100 Indian Processed Food and Agro Based Industries from all over India. Details Include Company Name and Postal Address (19,000), Contact Person (11,900), Phone (17,200 Landline /Mobile), Fax (7,100), E-mail (15,800), Website (3,800). Note: All Records does not contain all fields of information. However, maximum information has been incorporated. Format: MS Excel, .xlsx

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## [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 sterm 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.

## [Directory/ Database/ List of Edible Oil Industries/ Companies in India \(4th Edition\)](#)

**Format:** CD-Rom

**Book Code:** NID83

**Price:** Rs. 2,360.00 **US\$** 100.00

Offline Business directory is the best thing in today's business world. If you are searching for Buyers, then this Directory/Database is the perfect tool for you. By having the right business leads, you would be able to have immediate communication with prospective businesses, partners and customers through this boundless list of Edible Oil Industries/ Companies in India in csv excel format. We offer an extensive suite of Directories/ database to assist you in reaching the right businesses and people quickly and easily. Business Directories are used for sales planning, finding Buyers and marketing research to perform business analysis. With our company database/Directory, you will have access to company list. You will find a business list consisting of company contact details. We compiled list of companies in excel format to give you access to over hundred thousands of major & minor businesses and companies. From small business to Corporate Houses, our data is complete with business contact information to help you connect with the right companies or buyers. This database collection is a great resource for those suppliers who offer their goods and services to Edible Oil Industries/ Companies like, Oil Extractors, Crude Oil, Refinery Oil Chemicals, Edible Oil Refinery, Bottle, Container, Tin Containers, Plastic Can, Jerry Cans, Packaging Material Suppliers, Plant & Machinery Suppliers, Office Equipment Suppliers, Office Furniture Suppliers, Mobile Companies, Raw Material Suppliers, Advertisement Agencies, Office Stationery Suppliers, Transporters, Courier Companies, IT, Software Companies & Labour Contractors etc. Information in this database contains over 3,850 records of Edible Oil Industries/ Companies in India. Details Includes: Company Name (3,850), Contact Person (1,500), Postal Address (3,750), Phone No. (3,600 Landline or Mobile), Fax (1,800), E-mail (1,350), Website (315). Note: All Records does not contain all fields of information. However, maximum information has been incorporated. Format: MS Excel

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## [Handbook on Mushroom Cultivation and Processing \(with Dehydration, Preservation and Canning\)](#)

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

**Format:** Paperback

**Book Code:** NI164

**Pages:** 544

**ISBN:** 9788178330341

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

Mushrooms are the health food of the world. These are that fast growing basidiomycetous fungi which produce fleshy fruit bodies. They are rich in proteins, vitamins and minerals, so they are consumed as energy rich food. Mushroom has been attracting attention of mankind since ancient times and use of mushroom, as food is as old as human civilization.

Mushrooms are superior to many vegetables and beans in their nutritive value. It is very rich in protein, vitamins and minerals. Fresh mushrooms contain about 85% water and 3.2% protein. But dried mushrooms water content is low and protein level is high as 34 to 44% and the fat content is less than 0.3%. There are about 100 species of edible mushrooms all over the world. But only three of them are cultivated in India which are *Agaricus bisporus*, *Volvariella volvacea* and *pleurotus sajor caju*. Unfortunately, it is realized that mushrooms did not receive universal acceptance over the years since a number of naturally growing mushrooms are poisonous. Now the situation has been changed because the cultivated edible mushrooms are totally safe for human consumption. Mushroom cultivation fits in very well with sustainable farming and has several advantages: it uses agricultural waste products, a high production per surface area can be obtained, after picking; the spent substrate is still a good soil conditioner. They have less carbohydrate so they are believed to be suitable for diabetic patients. Fresh mushrooms have very limited life and hence they need to be consumed within few hours. But processing and canning increases their shelf life to few months. Osmotic dehydration is one of the important methods of processing mushroom which involves drying technology of mushroom. Mushrooms are very popular in most of the developed countries and they are becoming popular in many developing countries like India. Applications and market for mushrooms is growing rapidly in India because of their nice aroma, nutritious values, subtle flavour and many special tastes. Mushroom cultivation has been declared as a major thrust area by Government of India. Mushroom dish is a common item in all the big hotels. Mushroom production has increased many folds during the recent past. Mushrooms have found a definite place in the food consumption habits of common masses and there is a constant demand for it throughout the year. Some of the fundamentals of the book are nutritive value of edible

mushrooms, medicinal value of mushrooms, advantages of mushrooms, symptoms of mushroom poisoning, morphology of common edible mushrooms, classification of fungi a brief survey, chemical composition, anti nutritional factors and shelf life of oyster mushroom , osmotic dehydration characteristics of button mushrooms, mushroom cultivation, cultivation of white button mushroom (*agaricus bisporus*), factors determining the amount of spawn needed, fungicides for mushroom diseases insecticides for mushroom pests etc. The present book contains cultivation, processing, dehydration, preservation and canning of various species of mushrooms. It is resourceful book for agriculturists, researchers, agriculture universities, consultants etc.

**The Complete Book on Spices & Condiments (with Cultivation, Processing & Uses) 2nd Revised Edition**

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

**Format:** Paperback

**Book Code:** NI169

**Pages:** 888

**ISBN:** 9788178330389

**Price:** Rs. 2,275.00 US\$ 200.00

The term spices and condiments applies to such natural plant or vegetable products and mixtures thereof, used in whole or ground form, mainly for imparting flavor, aroma and piquancy to foods and also for seasoning of foods beverages like soups. Usually spices are an ingredient used to season a dish in the meal during its preparation and condiments are for using at the table to enhance the dish as each individual's tastes prefer. The great mystery and beauty of spices is their use, blending and ability to change and enhance the character of food. Spices and condiments have a special significance in various ways in human life because of its specific flavours, taste, and aroma. Spices and condiments play an important role in the national economies of several spice producing, importing and exporting countries. India is one of the major spice producing and exporting countries. Most of the spices and herbs have active principles in them and development of these through pharmacological and preclinical and clinical screening would mean expansion of considerable opportunities for successful commercialization of the product. Spices can be used to create these health promoting products. The active components in the spices phthalides, polyacetylenes, phenolic acids, flavanoids, coumarines, triterpenoids, terols and monoterpenes are powerful tools for promoting physical and emotional wellness. Some of the fundamentals of the book are definition of spices and condiments nomenclature or classification of spices and condiments, Indian central spices and cashew nut committee, origin, properties and uses of spices, forms, functions and applications of spices, trends in the world of spices, yield and nutrient uptake by some spice crops grown in sodic soil, tissue culture and in vitro conservation of spices, in vitro responses of piper species on activated charcoal supplemented media, soil agro climatic planning for sustainable spices production, potentials of biotechnology in the improvement of spice crops, medicinal applications of spices and herbs, medicinal properties and uses of seed spices, effect of soil solarization on chillies, spice oil and oleoresin from fresh/dry spices etc. The present book contains cultivation, processing and uses of various spices and condiments, along with photographs of machinery/equipments with addresses of their manufacturers. The book is an invaluable resource for new entrepreneurs, agriculturists, agriculture universities and technocrats.

# Cultivation and Processing of Selected Medicinal Plants

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

**Format:** Paperback

**Book Code:** NI175

**Pages:** 600

**ISBN:** 8178330032

**Price:** Rs. 1,175.00 **US\$** 125.00

Medicinal plants are important for human health. These plants have been used from the prehistoric times to present day. These plants based medicines are consumed in all civilizations. It is believed that the herbal medicine can give good effect to body without causing side effects to human life. Medicinal plants are not only a major resource base for the traditional medicine & herbal industry but also provide livelihood and health security to a large segment of Indian population. Medicinal plants constitute a large segment of the flora, which provide raw materials for use by various industries. They have been used in the country for a long time for their medicinal properties. These plants are staging a comeback and herbal renaissance is happening all over the globe. The herbal medicines today symbolise safety in contrast to the synthetics that are regarded as unsafe to human and environment. Although herbs had been priced for their medicinal, flavouring and aromatic qualities for centuries, the synthetic products of the modern age surpassed their importance, for a while. However, the blind dependence on synthetics is over and people are returning to the naturals with hope of safety and security. Besides, the usage of medical plants has been increasing as an important role that can support the economic system. Ayurveda, the well known indigenous system of medicine, is still regarded as a well organised traditional health care for large sections of rural as well as urban population of India. The medicinal plants sector at present is not well organised and needs special attention. Although different Ministries and Department in the Government sector and NGOs and individuals in the private sectors are making their efforts in different directions, yet there is a need to co ordinate and systematize. The medical plants for health are used as herbal treatments and therapies that can be new habits for culture. The market is very competitive and could easily be oversupplied. This book basically deals with therapeutic potential of medicinal plants, medicinal plants priorities in Indian medicines diverse studies and implications, recent developments of some natural products, production and management of medical plants on farms, classification, identification and naming of medicinal plants, pests and pest management in medicinal plants, Ajmalicine (Raubasine): a medicinally important alkaloid from catharanthus roseus



(vinca rosea), cultivation of rutin bearing eucalyptus species, iridoids and secoiridoids of the genus swertia, studies on medico ethnobotany, tropical periwinkle, tulsi, etc. The present book covers cultivation practices of selected commercially important medicinal plants with their processing details and uses. The book is very resourceful for medicinal plants growers, professionals, researchers, entrepreneurs and agriculture universities.

# **Potato and Potato Products Cultivation, Seed Production, Manuring, Harvesting, Organic Farming, Storage and Processing**

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

**Format:** Paperback

**Book Code:** NI199

**Pages:** 560

**ISBN:** 9788190439893

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

Potato ranks fourth position in the world after wheat, rice and maize as non cereal food crop. Potato is probably the most popular food item in the Indian diet and India is one of the largest producers of potato. It is used in many ways like vegetable, potato wafers/chips, powder, finger chips etc. Potato tubers constitute a highly nutritious food. It provides carbohydrates, vitamin C, minerals, high quality protein and dietary fiber. Potato is a rich source of starch and it is consumed mainly for its calorific value, also contains phosphorus, calcium, iron and some vitamins. Boiling potatoes increases their protein content and almost doubles their calcium content. It is vastly consumed as a vegetable and is also used in various forms such as starch, flour, alcohol, and dextrin and livestock fodder. It is estimated that about 25 % of the potatoes, which are spoiled due to several reasons, may be saved by processing and preservation of various types of processed products. The potatoes can be processed for preservation and value addition in the form of wafers/ chips, powder, flakes, granules, canned slices. Potato granules are used for the preparation of various recipes, to add to vegetable and non vegetable recipes and to enhance the quantity as well as to enrich the food value. There is a huge potential for processed potato products such as potato flakes, potato powder, frozen potatoes, frozen French fries, potato chips/wafers are one of the most popular snack items consumed throughout world. International trade in potatoes and potato products still remains thin relative to production, as only around 6 percent of output is traded. High transport costs, including the cost of refrigeration, are major obstacles to a wider international marketplace. The industry is still growing at a rapid pace where French fries are showing the highest growth followed by potato chips and potato powder/flakes. It is by far the largest product category within snacks, with 85% of the total market revenue. This book basically deals with origin, evolution, history and spread of potato, potato products, quality requirements for processing, morphological, size and shape, defects, biochemical, dry matter, reducing sugars, phenols, inheritance, morphological attributes, tuber shape, growth cracks, hollow heart, internal rust spots, greening, biochemical attributes, glycoalkaloids, dry matter, reducing sugars, enzymic browning, development of varieties for processing, areas suitable for growing

processing potatoes, processing quality of Indian potato varieties, processed potato products, dehydrated products at village level, potato chips, french fries and flakes commercial production, grading manual for frozen French fried potatoes for frozen French fried potatoes, areas of production, varieties, receiving, determining the quality and condition of raw potatoes for frying purposes, determining the quality and condition of raw potatoes for frying purposes, etc. The present book covers complete details of potato cultivation and processing in proper manner. This book is an invaluable resource for agriculture universities, students, technocrats and entrepreneurs.

# Handbook on Rice Cultivation and Processing

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

**Format:** Paperback

**Book Code:** NI200

**Pages:** 544

**ISBN:** 9788190568524

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

Rice is the staple food of over half the world population. Rice is normally grown as an annual plant, although in tropical areas it can survive as a perennial crop and can produce a ratoon crop for up to 30 years. The rice plant can grow to 1 to 1.8 m tall, occasionally more depending on the variety and soil fertility. Since its origin, the spread of rice cultivation is extensive and rice is now being grown wherever water supply is adequate and ambient temperature are suitable. The rice grain is covered with a woody husk or hull, which is indigestible and is to be removed in the first step during processing for making the rice edible. Rice cultivation is well suited to countries and regions with low labor costs and high rainfall, as it is labor intensive to cultivate and requires ample water. Rice can be grown practically anywhere, even on a steep hill or mountain. The traditional method for cultivating rice is flooding the fields while, or after, setting the young seedlings. This simple method requires sound planning and servicing of the water damming and channeling, but reduces the growth of less robust weed and pest plants that have no submerged growth state, and deters vermin. While flooding is not mandatory for the cultivation of rice, all other methods of irrigation require higher effort in weed and pest control during growth periods and a different approach for fertilizing the soil. Drying is an essential step in the processing and preservation of paddy; it is the process that reduces grain moisture content to a safe level for storage. Milling is a crucial step in post production of rice. The basic objective of a rice milling system is to remove the husk and the bran layers, and produce an edible, white rice kernel that is sufficiently milled and free of impurities. India is the second largest rice producing country of the world after China. India also grows some of the finest quality aromatic rice of which basmati is the most high quality rice. This book basically deals with history, origin and antiquity of rice, seed rice and seed production, harvest and post harvest operations, water management practices for rice, diseases and pests of rice and their control, application of biotechnology in aromatic rice improvement, traditional methods of parboiling, modernization of parboiling process, solvent extractive rice milling, general types of quick cooking rice processes, dry milled rice products in brewing, breakfast cereals, rice flakes, puffed rice, rice in multi grain cereals etc. The present book contains cultivation and processing of rice

in various ways. The book is very resourceful for the entrepreneurs, technocrats, research scholars etc.

# [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.

# [The Complete Book on Beekeeping and Honey Processing \(2nd Revised Edition\)](#)

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

**Format:** Paperback

**Book Code:** NI203

**Pages:** 544

**ISBN:** 9788190568555

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

Beekeeping is the maintenance of honey bee colonies, commonly in hives, by humans. Bees are accommodated in artificial lives where they live comfortably within easy reach of the bee keeper for examination and extraction of surplus honey, after keeping of sufficient honey in the combs for the bees. Honey is a product of bees, which gather sugar containing nectars from flowers. Honey should be processed as soon as possible after removal from the hive. Honey processing is a sticky operation, in which time and patience are required to achieve the best results. Careful protection against contamination by ants and flying insects is needed at all stages of processing. Bee honey is natural, unrefined food consumed as much in fresh or canned state. It is readily assimilated and is more acceptable to the stomach, particularly in the case of ailing persons, than cane sugar. It is an antiseptic and is applied to wounds and burns with beneficial results. Honey collection and its marketing in India are still not fully organised. The main uses of honey are in cooking, baking, as a spread on breads and as an addition to various beverages such as tea and as a sweetener in commercial beverages. Honey is the main ingredient in the alcoholic beverage mead, which is also known as honey wine or honey bear, honey is also used in medicines. A number of small scale industries depend upon bees and bee products. Honey and bees products find use in several industries which are under; pharmaceuticals, meat packing, bees wax in industries, bee venom, royal jelly, bee nurseries, bee equipments and hives etc. There is considerable demand for the honey and other products. Outside the thousands of homemade recipes in each cultural tradition, honey is largely used on a small scale as well as at an industrial level. Some of the fundamentals of the book are history of beekeeping in India present, all India co ordinate research project on honey bee research and training, future plan for development, the pattern of beekeeping today, development of beekeeping equipments, beekeeping industry and honeybee species, bee hive products, medicinal properties of honey, bees and agriculture, pesticidal poisoning to honeybees, handling bees, queen rearing and artificial queen, beekeeping and ancillary industries, honey based industries, honey in pharmaceuticals, honey in meat packing, beeswax in industries, bee stings precautions and treatment. The book contains the steps of

bee keeping in proper manner and details of honey processing. This book is an invaluable resource for new entrepreneurs, technocrats and also for established enterprises.

# **The Complete Technology Book on Alcoholic and Non-Alcoholic Beverages(Fruit Juices, Whisky, Beer, Rum and Wine)**

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

**Format:** Hardcover

**Book Code:** NI209

**Pages:** 824

**ISBN:** 9788178331126

**Price:** Rs. 2,575.00 US\$ 200.00

The alcoholic and non alcoholic beverages are being used by human being since centuries back. Accompanying the increase in the variety of consumption there has been a parallel increase in the variety of alcoholic and non alcoholic beverages offered for sale. The alcoholic drinks market is broadly classified into five classes, starting from beers, wines, hard liquors, liqueurs and others. Similarly non alcoholic drinks market is broadly classified into carbonated drinks, non carbonated drinks and hot beverages. These include juices, energy drinks, carbonated drinks, tea, coffee and bottled water. The commercial success of a soft drink formulation depends upon a number of factors. A strong, well placed advertising campaign will bring the consumer to purchase the new product but, thereafter, the level of repeat sales will reflect the degree of enthusiasm with which the new drink has been received. The dramatic growth of fruit juice and non carbonated fruit beverage markets worldwide has been made possible by the development of new packs and packing systems and improvements in traditional packaging. Tropical fruits are the newest arrivals on the juice and fruit beverage market. Whisky is the portable spirit obtained by distillation of aqueous extract of an infusion of malted barley and other cereals that has been fermented. It can be considered as the product of distillation of an unhopped beer. Beer is the world most widely consumed alcoholic beverage; it is the third most popular drink overall, after water and tea. Rum is a distilled alcoholic beverage made from sugarcane by products such as molasses, or directly from sugarcane juice, by a process of fermentation and distillation. The Indian alcoholic market has been growing rapidly for the last ten years, due to the positive impact of demographic trends and expected changes like rising income levels, changing age profile, changing lifestyles and reduction in beverages prices. Some of the fundamentals of the book are flavourings and emulsions, syrup room operation, fruit juices and comminuted bases, acids, colours, preservatives and other additives, high intensity sweeteners, packaging systems for fruit juices and non carbonated beverages, grape juice processing, processing of citrus juices, juice processing for pasteurized single strength, equipment for extraction and processing of soft and pome fruit juices, chemistry and technology of citrus juices and by products, legislation controlling production, labelling and

marketing, biochemical events during brewing fermentations, outline of the whisky producing process, types of beer brewed, aroma compounds of rum and their formation, cider and perry etc. The alcoholic and non alcoholic beverages described in this book are beer, wine, rum, whisky, cider and different types of fruit juices with packaging systems and other relevant parameters related to their manufacturing. The book will be very helpful to technocrats, new entrepreneurs, research scholars and for those who are already in to this field.



# Biopesticides Handbook

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

**Format:** Hardcover

**Book Code:** NI210

**Pages:** 544

**ISBN:** 9788178331133

**Price:** Rs. 1,575.00 **US\$** 150.00

Biopesticides are certain types of pesticides derived from such natural materials as animals, plants, bacteria, and certain minerals. Agricultural pesticides, properly used, are essential in supplying the food requirements of the world ever growing population. The use of synthetic pesticides affects the health of human being. The indiscriminate use of pesticides has adversely affected the health of the soil. The residual pesticides in the soil not only affect the soil quality but also the water quality, as they get leached into the ground water. Due to these reasons, role of biopesticides are very important for sustainable agriculture. The use of biopesticides for sustainable agriculture is a complex issue that at times is difficult to comprehend and plan. Biopesticides are usually inherently less toxic than conventional pesticides. They generally affect only the target pest and closely related organisms, in contrast to broad spectrum, conventional pesticides that may affect organisms as different as birds, insects, and mammals. They often are effective in very small quantities and often decompose quickly, thereby resulting in lower exposures and largely avoiding the pollution problems caused by conventional pesticides. Biopesticides, key components of integrated pest management (IPM) programmes, are receiving much practical attention as a means to reduce the load of synthetic chemical products being used to control plant diseases. In most cropping systems, biological pesticides should not necessarily be viewed as wholesale replacements for chemical control of plant pests and diseases, but rather as a growing category of efficacious supplements that can be used as rotation agents to retard the onset of resistance to chemical pesticides and improve sustainability. In organic cropping systems, biopesticides can represent valuable tools that further supplement the rich collection of cultural practices that ensure against crop loss to diseases. Some of the examples of biopesticides are triazino benzimidazol, thiophene sar, pyrazoles, hydroxyacetophenones, benzoylphenylureas, thiadiazolo S triazine etc. It is observed that India occupies a comparatively better position in the arena of biopesticides; in terms of growth of usage, percentage share of the total pesticide market and also in research publications. The driving forces behind this progress are identified as huge research infrastructure (universities and bio control labs) and favourable public support system/policies. Subsequently, it delves on strategies to incorporate the promotion of biopesticides into rural development efforts like

recognition of the huge traditional knowledge base and use of biopesticides developed using indigenous technologies. Some of the fundamentals of the book are synthesis of triazino benzimidazol as 1 biopesticides, synthesis and pesticidal activities of thiadiazolo S triazine and imidazol, synthesis and antimicrobial activities of pyrazoles, effects of penconazole on plasma membrane, metabolism of diclofop methyl , bleaching herbicides stimulate maize HMGR activity, soil transformation of acetochlor, propanil degrading amidase activity, inhibition of BTX B binding by RH 3421, KDR type resistance in German cockroach etc. This is the first book of its kind which provides different parameters about biopesticides. The book will not only be resourceful for new entrepreneurs but will also help the technocrats, research scholars and those who willing to know more about biopesticides.

# The Complete Book on Organic Farming and Production of Organic Compost

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

**Format:** Hardcover

**Book Code:** NI213

**Pages:** 448

**ISBN:** 9788178331157

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

India is an agro based country. It ranks 2nd in agricultural products manufacturing in the world. So organic farming plays an important role in agro field. India has many natural resources of various organic compounds and so it is an excellent opportunity to produce sufficient quantity of organic foods to meet the global demand. There is a bright future for organic farming to export its quality product. Organic farming is a form of agriculture that excludes the use of synthetic fertilizers and pesticides, plant growth regulators, livestock feed additives, and genetically modified organisms. This type of farming is not new to Indian farming community. Several forms of organic farming are being successfully practiced in diverse climate, particularly in rain fed, tribal, mountains and hill areas of the country. The popularity of organic farming is gradually increasing and now organic agriculture is practiced in almost all countries of the world, and its share of agricultural land and farms is growing. The present book contains the organic farming management, production and uses of various organic compounds, which are well known and also for agriculture for their worldwide use. Compost serves as a growing medium, or a porous, absorbent material that holds moisture and soluble minerals, providing the support and nutrients in which most plants will flourish. Use of organic manure is extremely essential for better crop productivity and maintaining the fertility of soil to ensure sustainable production. This book basically deals with Indian agriculture before the green revolution, characteristics of sustainable agriculture, essential characteristics of organic farming, objectives of organic and conventional farming, livestock and human wastes, organic farming in rice, important regulations for organic farming, production of organic compost, effect of organic fertilizers in pongamia pinnata, significance of azospirillum and pseudomonas on growth of elucine crocana, chemical composition of banana, effect of azospirillum and phosphate solubilizing culture on quality of sugarcane, industrial wastes as sources of plant nutrients, role of organic fertilizer in upland crop production etc. The book provides you with comprehensive information on organic farming and related methods of farming. The book aims to provide you with many other profitable information about the method of obtaining sustainable agricultural and organic farming.

**Directory / Database of Corporate/Leading Companies/Industries in Indian Food, Beverages and Tobacco Products (with Financial Figures) 6th Edition [.xlsx, excel format]**

**Format:** CD-Rom

**Book Code:** NID142

**Price:** Rs. 4,838.00 **US\$** 150.00

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## [Directory / Database of Corporate/Leading Companies in Indian Agriculture \(Agro\) Sector \(with Financial Figures\) 5th Edition \[.xlsx, excel format\]](#)

**Format:** CD-Rom

**Book Code:** NID144

**Price:** Rs. 4,248.00 **US\$** 150.00

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# Handbook on Citrus Fruits Cultivation and Oil Extraction

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

**Format:** Paperback

**Book Code:** NI223

**Pages:** 544

**ISBN:** 9788178331256

**Price:** Rs. 1,575.00 US\$ 150.00

Citrus fruits are produced all around the world. They contain healthy nutrition content that works wonders for the body. Citrus fruits act as a fabulous source of vitamin C and a wide range of essential nutrients required by the body. India only represents a mere 4% of global citrus fruit production. But now a day, there is a rise in its cultivation. This rise in citrus production is mainly due to the increase in cultivation areas & the change in consumer preferences towards more health & convenience food consumption & the rising incomes. Citrus fruits have long been valued as part of a nutritious and tasty diet. The flavours provided by citrus are among the most preferred in the world, and it is increasingly evident that citrus not only tastes good, but is also good for people. It is well established that citrus and citrus products are a rich source of vitamins, minerals and dietary fiber (non starch polysaccharides) that are essential for normal growth and development and overall nutritional well being. However, it is now beginning to be appreciated that these and other biologically active, non nutrient compounds found in citrus and other plants (phytochemicals) can also help to reduce the risk of many chronic diseases. Appropriate dietary guidelines and recommendations that encourage the consumption of citrus fruit and their products can lead to widespread nutritional benefits across the population. All citrus fruit is acid fruit. The acid fruits are the most detoxifying fruits and excellent foods. Lemon oil is obtained from the fruits of citrus Limonum, Risso (Rutaceae). Although the majority of commercially available essential oils are extracted from the original botanical material by use of steam distillation, most citrus essential oils are extracted by pressing the rinds of the citrus fruits. The oil of sweet orange is obtained from the fruits of citrus Aurantium Risso and the oil of bitter orange from fruits of citrus Bigaradia Risso (Auranciaceae). Orange Essential Oil is energizing and is usually well loved by men, women and children. Citrus fruit oils are cheaper than most other essential oils. Lemon or sweet orange oils that are obtained as by products of the citrus industry are even cheaper. Some of the fundamentals of the book are botanical classification, classification of genus citrus, criteria for citrus classification, information on important citrus fruits, subgenus fucitrus (edible citrus fruits), citrus cultivation, citrus fruits, kinnow mandarin, citrus fruit breeding, soil inspection for citrus family, nutrition for citrus world, proper

harvesting of citrus, post harvesting of citrus fruits, etc. This handbook on citrus fruits provides relevant information on most citrus crops, the basics of citriculture & production, pre & post harvest management, picking, storage etc. Selected topics on oil extraction of citrus fruits are also given to provide knowledge of the techniques used. This book will be helpful for technocrats, farmers, research scholar, institutions etc.

# Fruits, Vegetables, Corn and Oilseeds Processing Handbook

**Author:** H. Panda

**Format:** Paperback

**Book Code:** NI226

**Pages:** 592

**ISBN:** 9788178331270

**Price:** Rs. 1,675.00 US\$ 150.00

Fruits & vegetables are an important nutritional requirement of human beings as these foods not only meet the quantitative needs to some extent but also supply vitamins & minerals which improve the quality of the diet & maintain health. Fruit, vegetables & oil seeds processing is one of the pillars of the food & edible oil industry. India is the second largest producer of both fruits and vegetables. Fruits and vegetables are the reservoir of vital nutrients. Being highly perishable, 20 to 40% of the total production of fruits and vegetables goes waste from the time of harvesting till they reach the consumers. It is, therefore, necessary to make them available for consumption throughout the year in processed or preserved form and to save the sizeable amount of losses. At present, about 2% of the total produce is processed in India mainly for domestic consumption. Fruits and vegetables have great potential for value addition and diversification to give a boost to food industry, create employment opportunities and give better returns to the farmers. Oil seeds also play an important role in the food sector & daily life. Edible oils constitute an important component of Indian households. Domestic edible oil consumption in India is increasing. Self sufficiency in edible oils today stands at in recent years, availabilities of non conventional oil, rice bran oil, soybean oil, palmolein oil and cottonseed have increased. Oils are essential components of all plants. However, commercial oil production facilities only utilize plants that accumulate large amounts of oil and are readily available In order to improve the nutritional status of the people & also to exploit the export potential of processed products there is need to increase the productivity of processed food in the country. Currently, India accounts for 7.0% of world oilseeds output; 7.0% of world oil meal production; 6.0% of world oil meal export; 6.0% of world veg. oil production; 14% of world veg. oil import; and 10 % of the world edible oil consumption. Some of the fundamentals of the book are preservation of pineapple, mango and papaya chunks by hurdle technology, effect of boiling on beta-carotene content of forest green leafy vegetables consumed by tribals of south India, process development for production of pure apple juice in natural colour of choice, physical refining of rice bran and soybean oils, anti nutrients and protein digestibility of fababean and ricebean as affected

by soaking, dehulling and germination, quality changes in banana (*musa acuminata*) wines on adding pectolase and passion fruit, essential oil composition of fresh and osmotically dehydrated galgal peels, development of cold grinding process, packaging and storage of cumin powder, bakery products and confections, etc. This book deals completely on the basic principles & methodology of fruits, vegetables, corn & oilseed processing & its preservation. This will be very resourceful to readers especially to technocrats, engineers, upcoming entrepreneurs, scientists, food technologists etc.

# [The Complete Book on Gums and Stabilizers for Food Industry](#)

**Author:** H. Panda

**Format:** Paperback

**Book Code:** NI231

**Pages:** 480

**ISBN:** 9788178331317

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

Gums are plant flours (like starch or arrowroot) that make foods & other products thick. Gums are used in foods for many reasons besides being used as a thickener. Gums are important ingredient in producing food emulsifier, food additive, food thickener & other gum products. The main reason for adding a gum or hydrocolloid to a food product is to improve its overall quality. India is the largest producer of gums specially guar gum products. Similarly stabilizers are an indispensable substance in food items when added to the food items, they smoothens uniform nature and hold the flavouring compounds in dispersion. Gum technology stabilizers are carefully controlled blends of various food ingredients. Most processed foods need some sort of stabilization at some point during production, transportation, storage and serving. The science and technology of hydrocolloids used in food and related systems has seen many new developments and advances over recent years. The breadth and depth of knowledge of gums and stabilizers has increased tremendously over the last two decades, with researchers in industry and academia collaborating to accelerate the growth. Gums as food constituents or as food additives can influence processing conditions in the following ways; retention of water, reduction of evaporation rates, alteration of freezing rates, modification of ice crystal formation and participation in chemical reactions. Some of the fundamentals of the book are functions of gum, typical food applications, gums in food suspensions, rheology and characters of gums, natural product exudates, flavor fixation, ice cream, ices and sherbets, gelation of low methoxyl pectin, seaweed extracts, microbial gums, transformation of collagen to gelatin, cellulose gums, dairy food applications, bakery product applications, analysis of hydrocolloids, gums in food products, general isolation of gums from foods, identification of gums in specific foods, group analysis and identification schemes, group identification methods, qualitative group analysis etc. This book contains rheology of gums, plant sheet gums, microbial gums, cellulose gums and synthetic hydrocolloids different stabilizers used in food industry. The book will be very resourceful to all its readers, new entrepreneurs, scientist, food technologist, food industries etc.



# Handbook on Fermented Foods and Chemicals

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

**Format:** Paperback

**Book Code:** NI233

**Pages:** 672

**ISBN:** 9788178331379

**Price:** Rs. 1,875.00 **US\$** 150.00

Numerous foods are prepared by fermentation processes in which one or more kinds of microorganisms are responsible for the characteristic flavour or texture, and sometimes for the keeping quality of the product. The manufacture of fermented food products is carried out on a small scale in homes in every country. Fermented products are more palatable and are not as easily spoiled as the natural products. The microorganisms that produce the desirable changes may be the natural flora on the material to be fermented, or may be added as starter cultures. The yield of organic acids principally lactic, serve as a preserving agents. Lactic acid fermentation is an anaerobic intramolecular oxidation reduction process. Both homofermentative and heterofermentative lactic acid bacteria participate in food fermentations. In some fermented food products, yeasts and moulds also participate along with lactic acid bacteria. Most of the reactions in living organisms are catalyzed by protein molecules called enzymes. Enzymes can rightly be called the catalytic machinery of living systems. The real break through of enzymes occurred with the introduction of microbial proteases into detergents. Most of the enzymes are produced by microorganisms in submerged cultures in large reactors called fermentors. In choosing the production strain several aspects have to be considered. Industrial enzyme market is growing steadily. The reason for this lies in improved production efficiency resulting in cheaper enzymes, in new application fields. Tailoring enzymes for specific applications will be a future trend with continuously improving tools and understanding of structure-function relationships and increased search for enzymes from exotic environments. This field deals with how are the enzymes used and applied in practical processes. A lot of fungal, bacterial and actinomycete strains with potential for producing novel industrial enzymes have been identified. This book contains sterilization, fermentation processes, aeration and agitation, use of yeast, yeast production, fermentation raw materials, production of bacterial enzymes, bread making methods, effluent treatment, production of actinomycete protease, lactic acid, citric acid. This handbook will be very helpful to its readers who are just beginners in this field and will also find useful for upcoming entrepreneurs, existing industries, food technologist, technical institution etc.

# Handbook on Milk and Milk Proteins

**Author:** H. Panda

**Format:** Paperback

**Book Code:** NI241

**Pages:** 448

**ISBN:** 9788178331485

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

Proteins play an important role in nutrition, taste, allergies, texture, structure, processing and yield performance. In the food industry, proteins are a key element of our diet and an important ingredient for food technologists. The total protein component of milk is composed of numerous specific proteins. Isolated milk protein products represent an important and valuable source of protein ingredients due to their recognized superior nutritional, organoleptic and functional properties. Milk protein is a rich source of essential amino acids and they have been the subject of intensive research for an effort to unravel their molecular structure and interactions, relationship between structure and functional attributes, interactions of proteins during processing and, more recently, their physiological functions. Free fatty acids (FFA) in fresh milk normally amount to less than 1% of the total milk fat, yet they are important because of their effect on milk flavour. Now a day, the processing of milk is part of a highly organized and controlled dairy industry, which produces and markets a multitude of dairy products. Functional milk proteins are perfectly suited for use in the dairy sector of food production and the modern food processing industry is placing more and more emphasis upon the utilization of protein ingredients to provide specific functional properties to a wide range of formulated foods. In recent years, there has been a great deal of progress in the understanding and management of milk proteins across the production chain. Some of the fundamentals of the book are surface tension of milk, lactose chemistry, milk proteins, phosphorylation of milk proteins, comparative aspects of milk proteins, utilization of milk proteins, heat stability of milks, heat stability of homogenized concentrated milk, lysinoalanine in milk and milk products, heat coagulation of type a milk, syneresis of heated milk, fatty acids in milk, milk gel assembly, mechanical agitation of milk, natural, leucocyte and bacterial milk, grass and legume diets and milk production. This book provides a complete overview and offers insights into topics for more in-depth reading on milk and milk proteins. The book covers chapters on milk proteins, biosynthesis & secretion of milk proteins, utilization, types of milk proteins, phosphorylation, milk glycoproteins and many more. It is hoped that this book will be very helpful to all its readers, students, new entrepreneurs, food technologist,

technical institution and scientists.

# [The Complete Book on Managing Food Processing Industry Waste](#)

**Author:** H. Panda

**Format:** Paperback

**Book Code:** NI245

**Pages:** 400

**ISBN:** 9788178331454

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

Food industry produces large volumes of wastes, both solids and liquid, resulting from the production, preparation and consumption of food. These wastes pose increasing disposal and can pose severe pollution problems and represent a loss of valuable biomass and nutrients. Many standard industrial waste treatment texts sufficiently address a few major technologies for conventional in plant environmental control strategies in the food industry. Environmental legislation has significantly contributed to the introduction of sustainable waste management practices worldwide. Considering the challenges in the area of food industry, efforts are to be made to optimize processing technologies to minimize the amount of waste. Food processing wastes have a potential for conversion into useful products of higher value as by product, or even as raw material for other industries, or for use as food or feed after biological treatment. There are many examples of utilizing waste materials from plant material processed by canneries, there are many other types of waste that can be utilized. In many canneries, the organic from the processing system is combined with the other types of non usable wastes, such as hardware, glass, cans, nails etc. Food industry should also have to concentrate on waste avoidance as well as utilization of process wastes. All the combined efforts of waste minimization during the production process, environmentally friendly preservation of the product, and utilization of by products would substantially reduce the amount of waste, as well as boost the environmental aspect of food processing industry. This book basically deals with utilization of food industry wastes, ultra filtration in the recovery of food waste, recovery of fruit and vegetable wastes, recovery of protein, the screening of vegetable wastes, fat extraction, treatment of fatty effluents, recovery and utilization of protein, conversion of bone to edible products, utilization of waste in animal feeds, production of earthworm proteins, use of microbiological agents in upgrading waste for feed and food, underutilized proteins for beverages, coffee and tea wastes, utilization of food waste in pet food industry, etc. Readers, technical institution, food technologists, technocrats, existing industries and new entrepreneurs will find valuable material in this book. This book gives a complete detail on invaluable waste management concepts, utilization of by-products and the

practical methods to implement them. This book deals on the techniques and methods for food processing wastage. Comprehensive in scope, the book provides solutions that are directly applicable to the daily waste management problems specific to the food processing industry.



## [Directory/Database of Corporate/Leading Companies in Indian Oils, Fats & Derived Products \(Animal Fats & Oils, Vegetable Oils, Vanaspati, Margarine, Waxes From Bees, Oil Cakes, Meals, Animal Feed\)\(with Financial Figures\) 5th Edition \[.xlsx, excel format\]](#)

**Format:** CD-Rom

**Book Code:** NID156

**Price:** Rs. 4,602.00 **US\$** 150.00

Offline Business directory is the best thing in today's business world. If you are searching for Buyers, then this Directory/Database is the perfect tool for you. By having the right business leads, you would be able to have immediate communication with prospective businesses, partners and customers through this boundless list of All India Companies in csv excel editable format (easy sorting and filtering). We offer an extensive suite of Directories/ database to assist you in reaching the right and targeted businesses and people quickly and easily. Business, B2B&Irm;, Industrial Directories, Mailing List are used for sales planning, finding Buyers, Sector, Business House and marketing research to perform business analysis. With our company database/Directory, you will have access to company list, Corporate/Leading Companies, Small & Medium Enterprises (SME), you will find a business list consisting of company contact details. We compiled list of companies in excel format to give you access to over hundred thousands of major & minor businesses and companies. From small business to Corporate Houses, our data is complete with business contact information to help you connect with the right companies or buyers. This database collection is a great resource for Buyers and those suppliers who offer their goods and services to Trade, Manufacturing industry, Companies, Corporate Houses & Industries in India. Contains: 431 records with following Information: Name of Company, Address, City, Pin Code, Phone, Fax, Email (289), Website (96). Name of Directors, Location of Plants, Project Capacity, Production, List of Major Raw Materials, Name of Products, Turnover, Major Raw Materials with their consumption quantity & Raw material value, credit ratings. Financial Comparison amongst companies assets, Net worth, Cash flow, Cost as % of sales, Raw material turnover, Selling & distribution expenses, growth of assets, liabilities Income & expenditure, Liquidity Ratios, Profitability Ratio, Profits, Return Ratios, Structure of Assets & Liabilities (%), Working Capital & Turnover Ratios) (\*Wherever available) Note: All Records does not contain all fields of information. However, maximum information has been incorporated. Format: MS Excel, .xlsx

**Business Directory/Database of Milk and Dairy Products in India (2nd Edition) (Companies/ Industries of Dairy Consumables, Dairy Farms & Dairy Products, Feed, Feed Ingredients, Dealers, Dairy Equipment, Industrial Chemicals, Food Chemicals, Agro Chemical)**

**Format:** CD-Rom

**Book Code:** NID174

**Price:** Rs. 3,658.00 **US\$** 200.00

Including: Dairy Consumables, Dairy Farms & Dairy Products, Feed, Feed Ingredients, Dealers, Dairy Equipment, Industrial Chemicals, Food Chemicals, Agro Chemicals, Testing Laboratories Contain Over 19,500 Records. Details include Company Name, Postal Address (19,400), Contact Person (7,900), Phone-Land line (18,000), Mobile (3,000), Fax (7,100), E-mail (5,440), Website (2,900) Product Details. Note: All Records does not contain all fields of information. However, maximum information has been incorporated. Format: MS Excel

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**Handbook on Tall Oil Rosin Production, Processing and Utilization**

**Author:** Dr. H. Panda

**Format:** Paperback

**Book Code:** NI247

**Pages:** 480

**ISBN:** 9788178331515

**Price:** Rs. 1,575.00 US\$ 150.00

Tall oil, a by-product of kraft pulping of pine wood, is formed by acidifying black liquor soap skimmings. It consists of resin acids or rosin, fatty acids, and neutrals. Crude tall oil is an excellent source of rosin and tall oil fatty acid, an industrial-grade oleic and linoleic acid blend. The bulk of the neutrals, largely esters of fatty acids, sterols, resin and wax alcohols, and hydrocarbons, boil at either lower or higher temperatures than the boiling range of the fatty and resin acids. Tall oil itself has a variety of uses in industry. It is used as a frothing agent in the flotation process for reclaiming low grade copper- lead- and zinc-bearing ores, and as a solvent or wetting agent in a variety of textile and synthetic fibre manufacturing processes. The distilled fatty acids are used in soaps, detergents and disinfectants and as a base for lubricating greases, textile oils, cutting oils and metal polishes. They are also used as drying agents in paint, although synthetic substances are widely used. The fatty acids are unsaturated and on exposure to air undergo autoxidation and polymerization to form resin-like materials which form a tough protective coating. Resin acids are used in rubber polymerization and compounding, as size to impart water resistance to paper, and in adhesives and printing inks. Resin acids are the major component of a substance known as rosin, which is used by musicians to improve the grip of bows used for string instruments. The book contains production details of different products like recovery of crude tall oil, Composition and properties of crude tall oil, Lab. Scale fractional vacuum distillation, tall oil soap acidulation, purification of sulphate soap, hydrodynamic separation of CTO, dimerization of tall oil fatty acid, black liquor soap recovery methods, tall oil in asphalt products and petroleum uses, tall oil in liquid soaps, tall oil in rubber, paper and printing inks etc. This book is very useful for scientists, scholars, consultants and technical institutions.

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## [Integrated Organic Farming Handbook](#)

**Author:** Dr. H. Panda

**Format:** Paperback

**Book Code:** NI248

**Pages:** 472

**ISBN:** 9788178331522

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

Organic agriculture has grown out of the conscious efforts by inspired people to create the best possible relationship between the earth and men. After almost a century of neglect, organic agriculture is now finding place in the mainstream of development and shows great promise commercially, socially and environmentally. Integrated organic farming is a commonly and broadly used word to explain a more integrated approach to farming as compared to existing monoculture approaches. It refers to agricultural systems that integrate livestock and crop production and may sometimes be known as Integrated Bio systems. It denotes a holistic system of farming which optimizes productivity in a sustainable manner through creation of interdependent agri-eco systems where annual crop plants (e.g. wheat), perennial trees (e.g. horticulture) and animals (including fishes where relevant) are integrated on a given field or property. This concept of organic farming is based on following principles: 1. Nature is the best role model for farming, since it does not use any inputs nor demand unreasonable quantities of water. 2. The entire system is based on intimate understanding of nature's ways of replenishment. The system does not believe in mining of the soil of its nutrients and do not degrade it in any way. 3. The soil in this system is considered as a living entity 4. The soil's living population of microbes and other organisms are significant contributors to its fertility on a sustained basis and must be protected and nurtured, at all cost. 5. The total environment of the soil, from soil structure to soil cover is more important and must be preserved. Integrated Organic farming is a method of farming system, which primarily aims at cultivating the land and raising crops in such a way, so as to keep the soil alive and in good health. It is the use of organic wastes (crop, animal and farm wastes, aquatic wastes) and other biological materials, mostly produced insitu- along with beneficial microbes (bio fertilizers) to release nutrients to crops, which connotes the 'organic' nature of organic farming. It is also termed as organic agriculture. In the Indian context it is also termed as 'Javik Krishi'. We have compiled all the relevant information regarding integrated organic farming in this book. This is first book of its kind which contains reliable details related to organic farming, green manuring, biological nitrogen fixation,

uses of vermiculture bio-tech, organic fertilizers for flooded rice ecosystem, biological pest management, press mud as plant growth promoters, bio fertilizer for multipurpose tree species, rice- fish integration, response of crops to organic fertilizer and many more. The book is very useful for farmers, agriculture, universities, consultants and research scholars.

# [The Complete Book on Fruits, Vegetables and Food Processing](#)

**Author:** Dr. H. Panda

**Format:** Paperback

**Book Code:** NI250

**Pages:** 648

**ISBN:** 9789381039229

**Price:** Rs. 1,675.00 **US\$** 150.00

Food processing is the transformation of raw ingredients into food, or of food into other forms. Food processing typically takes clean, harvested crops or butchered animal products and uses these to produce attractive, marketable and often long shelf-life food products. Benefits of food processing include toxin removal, preservation, easing marketing and distribution tasks, and increasing food consistency. In addition, it increases yearly availability of many foods, enables transportation of delicate perishable foods across long distances and makes many kinds of foods safe to eat by de-activating spoilage and pathogenic micro-organisms. Processed foods are usually less susceptible to early spoilage than fresh foods and are better suited for long distance transportation from the source to the consumer. The extremely varied modern diet is only truly possible on a wide scale because of food processing. Food Dehydration is a method of food preservation that works by removing water from the food, which inhibits the growth of microorganisms. The dehydration process has to check various parameters like heat-mass transfer, atmospheric pressure, equipments suitable for drying etc. to ensure suitable dehydration of food. Food processing techniques have to take measures on to maintain food safety and control risks and hazards associated with food processing. The book includes dehydration process of Onion, roasting of coffee beans, development process of Guava squash, preparation of fried potato chips, processing of rice, butter and margarine, canning of chilies Plums, processing and preservation of jack fruit, characteristics of sweetened dahi, cereal grains, instant chutneys from pudina and gongura, starch isolated from potato tubers, coating of cashew kernel baby bits, ripening changes in mango fruits, mechanical and thermal properties of maize, storage of basmati rice under carbon dioxide-rich atmosphere, effect of different varieties of soya bean on quality of paneer, analysis of menthol content in pan masala samples, preparation of dehydrated potato cubes, quality evaluation of raw dried mango slices khatai and mango powder amchur, packaging and storage of biscuits containing finger millet flour, storage effect on microbial safety of potato flour, processing and quality evaluation of ready-to-eat watermelon nectars etc. The book is highly recommended to new entrepreneurs, existing units who wants to get more information of processing of fruits

and vegetables.



# [The Complete Book on Cashew \(Cultivation, Processing & By-Products\)](#)

**Author:** Dr. H. Panda

**Format:** Paperback

**Book Code:** NI253

**Pages:** 640

**ISBN:** 9788178331560

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

Now a day's horticultural commodities getting export from India, among them cashew retain top position. For cashew cultivation certain parameters such as characteristics of cashew, weather condition, geographical location, propagation - layering, budding and grafting, nature of soil are the main to improve and increase the overall productivity of cashew with suitable planning of efficient water management. This book includes organic farming method of cashew. Three main cashew products are traded on the international market - raw nuts, cashew kernels and cashew nut shell liquid (CNSL). A fourth product - the cashew apple is generally processed and consumed locally. This book is not only confined to the different methods of cashew processing but also describe about by-products obtained from cashew. The traditional method of cashew processing through which we get CNSL(Cashew Nut Shell Liquid),the major source of Cardanol. We also came to know about production of CNSL derivatives, polymerization of CNSL, rubber like elasticity products, styrene product of CNSL, multifunctional alcohol obtained from CNSL and lots of other information. Cardanol is a phenolic lipid which is the byproduct of cashew nut processing. It has several uses and applications in chemistry, chemical industries, additives industries and fuel industries for low sulphur diesel fuel. This book contains the purification process of CNSL for isolation of cardanol, evaluation of copperised CNSL and neem oil as wood preservatives. It also provides a wide idea to their readers about its nutritional value, commercial exploitation, hygiene and safety issues, packaging and preservation, uses, manufacturers and suppliers of machinery of this process. This book also engaged in quality control system, design and development of soft nano materials from CNSL cashew to play a vital role in nano technology. It covers all the area concerned in this field and presents a crystal clear overview on the process and its by-product from all possible aspects.

## [Confectionery Products Handbook\(Chocolate, Toffees, Chewing Gum & Sugar Free Confectionery\)](#)

**Author:** NPCS Board of Food Technologists

**Format:** Paperback

**Book Code:** NI254

**Pages:** 672

**ISBN:** 9788178331539

**Price:** Rs. 1,975.00 US\$ 200.00

Confectionery manufacture has been dominated by large scale industrial processing for several decades. Confectionery implies the food items that are rich in sugar and often referred to as a confection and refers to the art of creating sugar based dessert forms, or subtleties (subtlety or sotelty), often with pastillage. The simplest and earliest confection used by man was honey, dating back over 3000 years ago. Traditional confectionery goes back to ancient times, and continued to be eaten through the Middle Ages into the modern era. Sugar confectionery has developed around the properties of one ingredient – Sucrose. It is a non-reducing disaccharide. The principal ingredient in all confectionery is sucrose, which in its refined form has little flavour apart from its inherent sweetness. This handbook contains Packaging in the confectionery industry, Structure of sugar confectionery, Flavouring of confectionery, Confectionery plant, Ingredients, Quality control and chemical analysis, Medicated confectionery and chewing Gum, Chocolate flow properties, General technical aspects of industrial sugar confectionery manufacture, Manufacture of liquorice paste, Extrusion cooking technology, Manufacture of invert sugar, Marzipan and crystallized confectionery. The manufacture of confectionery is not a science based industry, as these products have traditionally been created by skilled confectioners working empirically. The aim of this handbook is to give the reader a perspective on several processes and techniques which are generally followed in the confectionery industry. The texture and technological properties of confectionery products are to a large extent controlled by its structure. The book is aimed for food engineers, scientists, technologists in research and industry, as well as for new entrepreneurs and those who are engaged in this industry.

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## [Handbook on Organic Farming and Processing](#)

**Author:** Dr. H. Panda

**Format:** Paperback

**Book Code:** NI255

**Pages:** 400

**ISBN:** 9788178331546

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

India is an agro based country. So organic farming plays an important role in agro field. The popularity of organic farming is gradually increasing and now organic agriculture is practiced in almost all countries of the world, and its share of agricultural land and farms is growing. As the organic food market continues to expand, so do the opportunities for small farmers. Organic farming has emerged as the only answer to bring sustainability to agriculture and environment. This handbook is a comprehensive guide to growing, certifying, and marketing organic produce. Organic farming is not only a philosophy, but also a well-researched science that combines soil fertility, plant pathology and other biological and environmental sciences. The major contents of this book are Sustainable Agriculture, National Programme on organic farming, Integration with organics and biofertilizers, Bulky organic manures and crop residues, Manuring on sight, Manuring potentials, Green Manuring, Production and promotion of organic fertilizers, Vermi composting, Response of crops to organic fertilizers, Phosphate solubilizing, *Bacillus thuringiensis*, Crop residue management, Integrated nutrient management towards sustainable agriculture, Integrated farming system, Mechanism of nitrogen fixation, Economics and marketing of organic farming. As we have seen, the booming development taking place in organic farming and marketing offers many opportunities. We will be able to go on contributing to the establishment of organic production systems and this could lead to changes in life style and consumption patterns that will reach far beyond food and nutrition. This book will be very helpful to soil scientists, microbiologists, biologists, students, new entrepreneurs, fertilizer industries, training centers and to all those interested in efficient use and sustainable farming.

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[\*\*Directory / Database of Corporate/Leading Companies in Indian Fertilizer Industries \(Chemical and Bio\) with Financial Figures \(5th Edition\) \[.xlsx, excel format\]\*\*](#)

**Format:** CD-Rom

**Book Code:** NID176

**Price:** Rs. 6,490.00 **US\$** 225.00

Offline Business directory is the best thing in today's business world. If you are searching for Buyers, then this Directory/Database is the perfect tool for you. By having the right business leads, you would be able to have immediate communication with prospective businesses, partners and customers through this boundless list of All India Companies in csv excel editable format (easy sorting and filtering). We offer an extensive suite of Directories/ database to assist you in reaching the right and targeted businesses and people quickly and easily. Business, B2B&Irm;, Industrial Directories, Mailing List are used for sales planning, finding Buyers, Sector, Business House and marketing research to perform business analysis. With our company database/Directory, you will have access to company list, Corporate/Leading Companies, Small & Medium Enterprises (SME), you will find a business list consisting of company contact details. We compiled list of companies in excel format to give you access to over hundred thousands of major & minor businesses and companies. From small business to Corporate Houses, our data is complete with business contact information to help you connect with the right companies or buyers. This database collection is a great resource for Buyers and those suppliers who offer their goods and services to Trade, Manufacturing industry, Companies, Corporate Houses & Industries in India. Products: NITROGENOUS FERTILIZERS Ammonium Chloride, Ammonium Sulphate, Sodium Nitrate, Calcium Cynamide, Calcium Nitrate, Magnesium Nitrate, Nitrogenous Straight Fertilizers PHOSPHATIC FERTILIZERS Superphosphates, Phosphatic straight Fertilizers, Phosphatic NPK Fertilizers POTASSIC FERTILIZERS Crude Natural Potassium Salts, Potassium Chloride, Potassium Sulphate MIXED FERTILIZERS Diammonium Phosphate, Ammonium Phosphate, Ammonium Phosphate Sulphate, Nitrophosphate, NPK Mixed Fertilizers, Other Mixed Fertilizers Contains: 251 records with following Information: Name of Company, Address, City, Pin Code, Phone, Fax, Email (202), Website (105). Name of Directors, Location of Plants, Project Capacity, Production, List of Major Raw Materials, Name of Products, Turnover, Major Raw Materials with their consumption quantity & Raw material value, credit ratings. Financial Comparison amongst companies assets, Net worth, Cash flow, Cost as % of sales, Raw material turnover, Selling & distribution expenses, growth of assets, liabilities Income & expenditure, Liquidity Ratios, Profitability Ratio, Profits, Return Ratios, Structure of Assets & Liabilities (%), Working Capital &

Turnover Ratios) (\*Wherever available) Note: All Records does not contain all fields of information. However, maximum information has been incorporated. Format: MS Excel, .xlsx

**Bakery Industry in India (Bread, Biscuits and Other Products)**  
**Present & Future Prospects, Market Size, Statistics, Trends, SWOT**  
**Analysis and Forecasts (Upto 2017)**

**Author:** NPCS Team

**Format:** Paperback

**Book Code:** NI265

**Pages:** 118

**ISBN:** 9789381039366

**Price:** Rs. 35,400.00 US\$ 980.00

The market research report titled 'Bakery Industry in India (Bread, Biscuits and other products) – Present & Future Prospects, Market Size, Statistics, Trends, SWOT Analysis and Forecasts (Upto 2017)' released by Niir Project Consultancy Services, provides a comprehensive analysis on Indian bakery industry covering detailed reporting of the bread and biscuits sector in India. The report also provides a bird's eye view of the global bakery industry with details on projected market size and then progresses to evaluate the Indian industry in detail. The report elucidates the structure of Indian bakery industry, its classification in various products (Biscuits, bread, cakes, pastries, buns and rusks) and then provides a categorical overview of bread and the biscuits sector. The Indian biscuit sector is dominated by players like Britannia, Parle and Sunfeast brand (ITC) together with other small players like Priyagold, Anmol Biscuits, Cremica etc whereas bread sector has only two major players, Britannia and Modern; and a host of regional players like Harvest Gold, Bonn, Vibbs etc. The report provides an expansive market analysis of the Indian bakery sector by covering areas like growth drivers, trends prevailing in the industry as well as comprehensive SWOT analysis of the sector. The report identifies growth factors of the industry as changing perception of the bakery products coupled with changing lifestyles of the Indian population. Consumption of bakery products was not in the Indian culture; however with changing eating habits of the people and with rising western influence on food consumption patterns, bakery products today have got takers from all age groups in the country. Rising preference for premium biscuit category is another factor that will contribute in the volume growth for the industry. Glucose segment has been losing its share to categories like cookies and cream biscuits which are growing at a much higher rate than the overall biscuit sector. Also the industry has been experiencing fortification of the bakery products in order to satiate the burgeoning appetite of the 'health conscious' Indian. Numerous healthy products have been launched in the bakery segment and are gaining popularity at a high rate. Mounting presence of bakery chains has further triggered the growth in the sector. Several international bakery chains have entered in India recognizing potential of the industry. Trends that have been gaining ground in the sector are e-retailing of the bakery products, aggressive

expansion plans of the incumbents as well as technological and ingredients advancement. Just when you thought that electronics and clothes were the only popular categories in e-retailing, there came bakery products which have been gaining traction in the e-retailing segment. Bakers are also bringing innovation and advancement in the technology and ingredients they use. Packaging front has also seen some changes in the past years. The report further evaluates the position of the industry by providing insights to the SWOT analysis of the industry. Large Indian population, abundant supply of raw materials and low capital requirements are some strengths of the bakery segment in India. India is among top producers of key raw materials of the bakery industry which puts sector in the sweet spot. The sector faces challenges in the form of raw material fluctuations, high taxation as well as its unorganized nature. Industry's raw materials being agricultural in nature are exposed to seasonal fluctuations in terms of availability and price movements. Rising competition in the sector due to low capital requirements and high growth rate of the sector is another impediment faced by the industry. However even after such challenges, the industry has opportunities galore. Low consumption of bakery products in the industry and spurt in the organized retail in the country are some of the biggest opportunities for the bakery players. Rising incomes as well as emergence of new middle class segment will also be key factors in the growth for the industry. Indian bakery segment is already in a favorable position with high rural penetration of its products which will help it tap the Indian rural consumption boom. The next segment of the report scrutinizes the demand supply scenario of the bakery industry with projections of important numbers covering the overall bakery sector as well as biscuit and bread segment also. The report also provides you a succinct view on the foreign trade of bakery products. It captures the current market size of the sector as a whole together with bread and biscuit segment coupled with forecasts for the next five years. The report also includes key player profiles of players like Britannia Industries Ltd, Parle Products Ltd, ITC Ltd, Surya Food & Agro Ltd (Priyagold) and Modern Food Industries India Ltd. The report shares vital information like shareholding pattern, revenue mix, plant location and financial summary of the aforesaid companies. The next segment provides complete financial comparison of bakery companies in India. Indian bakery industry is one of the biggest sections in the processed food industry of the nation and has undergone a massive change majorly on account of changing perception of bakery products and evolving consumer tastes. Rising urbanization and growth in the disposable incomes of the Indian population has proven



to be a magnet for international bakery chains owing to which the sector has seen an influx of foreign bakery companies foraying into India which has helped in improving the quality of Indian bakery products. Today there is a constant effort by the bakery players to innovate their product line to match up to Indian palate. Driven by evolving perception of bakery products in India, consumption boom in the nation and changing consumer preferences, we estimate the Indian bakery industry to touch levels of INR 483 billion in the next five years.

Reasons for Buying this Report: • This research report helps you get a detail picture of the industry by providing overview of the industry along with the market structure and classification • The report provides market analysis covering major growth driving factors for the industry and latest market trends in the industry • This report helps to understand the present status of the industry by elucidating a comprehensive SWOT analysis and scrutiny of the demand supply situation • Report provides analysis and in-depth financial comparison of major players/competitors • The report provides forecasts of key parameters which helps to anticipate the industry performance

Our Approach: • Our research reports broadly cover Indian markets, present analysis, outlook and forecast for a period of five years. • The market forecasts are developed on the basis of secondary research and are cross-validated through interactions with the industry players • We use reliable sources of information and databases. And information from such sources is processed by us and included in the report

**Emerging Opportunities in Booming INDIAN MAIZE PROCESSING INDUSTRY-Corn Starch, Dextrose, Liquid Glucose, Sorbitol, Gluten Meal, Germ Oil (Why to Invest, Core Project Financials, Potential Buyers, Market Size & Analysis)**

**Author:** NPCS Team

**Format:** Paperback

**Book Code:** NI271

**Pages:** 33

**ISBN:** 9789381039434

**Price:** Rs. 35,400.00 **US\$** 650.00

The research report titled Emerging Opportunities in Booming INDIAN MAIZE PROCESSING INDUSTRY-Corn Starch, Dextrose, Liquid Glucose, Sorbitol, Gluten Meal, Germ Oil (Why to Invest, Core Project Financials, Potential Buyers, Market Size & Analysis) released by Niir Project Consultancy Services aims at providing a roadmap for investing into the sector by covering all the critical data required by any entrepreneur vying to venture into maize starch segment in India. While expanding a current business or while venturing into new business, entrepreneurs are often faced with the dilemma of zeroing in on a suitable product/line. And before diversifying/venturing into any product, they wish to study the following aspects of the identified product: • Good Present/Future Demand • Export-Import Market Potential • Raw Material & Manpower Availability • Project Costs and Payback Period We at NPCS, through our reliable expertise in the project consultancy and market research field, have identified maize starch & allied products project, in the maize processing segment, which satisfies all the above mentioned requirements and has high growth potential in the Indian markets. And through this report we aim to help you make sound and informed business decision. The report contains all the data which will help an entrepreneur find answers to questions like: • Why I should invest in maize starch project? • Who are the customers of the product? • What will drive the growth of the product? • What are the costs involved? • What will be the market potential? The report embarks the analysis by enhancing the basic product knowledge of the capitalist by stating details like product definition, product uses & application, by-products & related products and a general overview of the product market. In here, the report provides an overview of the maize starch market along with a snapshot of maize crop market in India. The report further enlightens the entrepreneur about the potential buyers of the product, Maize starch which will help him identify his customers and place his product correctly. It is followed by a detailed analysis & enumeration of various factors that makes the case for investing in the sector along with graphical representation and forecasts of key consumer data. The report further assesses the market potential of the product by listing import-export markets of maize starch & allied products, recent developments in the sector and by providing sector outlook and market size. The report then turns the focus towards

manufacturing side of maize starch & allied products. It provides project financials of a model project with specified product list and plant capacity along with excise and customs duty rates for maize starch for year 2013-14. It enumerates project information like raw materials required for manufacturing maize starch & allied products, manufacturing process, list of machinery and basic project financials. Project financials like plant capacity, costs involved in setting up of project, working capital requirements, payback period, projected revenue and profit are listed in the report. The above mentioned project details are for maize starch, sorbitol, dextrose, liquid glucose, vitamin C, germ oil and gluten feed plant. The report also provides key players in the segment with their contact details. Starch Industry is often termed as 'Sunrise Industry' due to its high growth potential and omnipresence across various other industries. This report helps an entrepreneur gain meaningful insights into the sector and make informed and sound business decision. Reasons for buying the report:

- This report helps you to identify a profitable project for investing or diversifying into by throwing light to crucial areas like industry size, demand of the product and reasons for investing in the product
- This report provides vital information on the product like its definition, characteristics and segmentation
- This report helps you market and place the product correctly by identifying the target customer group of the product
- This report helps you understand the viability of the project by disclosing details like raw materials required, manufacturing process, project costs and snapshot of other project financials
- The report provides a glimpse of important taxes applicable on the product
- The report provides forecasts of key parameters which helps to anticipate the industry performance and make sound business decisions

Our Approach:

- Our research reports broadly cover Indian markets, present analysis, outlook and forecast for a period of five years.
- The market forecasts are developed on the basis of secondary research and are cross-validated through interactions with the industry players
- We use reliable sources of information and databases. And information from such sources is processed by us and included in the report

**EMERGING INVESTMENT OPPORTUNITY IN INDIAN BAKERY INDUSTRY (Biscuits, Bread and Other Bakery Products) Why to Invest, Project Potential, Key Investment Financials, Industry Size & Analysis**

**Author:** NPCS Team

**Format:** Paperback

**Book Code:** NI273

**Pages:** 42

**ISBN:** 9789381039458

**Price:** Rs. 29,500.00 **US\$** 500.00

The report titled 'EMERGING INVESTMENT OPPORTUNITY IN INDIAN BAKERY INDUSTRY (Biscuits, Bread and Other Bakery Products)-Why to Invest, Project Potential, Key Investment Financials, Industry Size & Analysis' released by Niir Project Consultancy Services makes investing in Indian bakery segment simplified. The report analyzes investment scenario of the industry and project feasibility of a bakery plant. The report covers crucial aspects like reasons for investment in the sector, core project financials, glimpse of the regulatory environment of the industry, potential buyers and analysis of the industry as a whole. While expanding a current business or while venturing into new business, entrepreneurs are often faced with the dilemma of zeroing in on a suitable product/line. And before diversifying/venturing into any product, they wish to study the following aspects of the identified product: • Good Present/Future Demand • Export-Import Market Potential • Raw Material & Manpower Availability • Project Costs and Payback Period We at NPCS, through our reliable expertise in the project consultancy and market research field, have identified bakery project, in the processed food segment, which satisfies all the above mentioned requirements and has high growth potential in the Indian markets. And through this report we aim to help you make sound and informed business decision. The report contains all the data which will help an entrepreneur find answers to questions like: • Why I should invest in bakery project? • Who are the customers of the product? • What will drive the growth of the product? • What are the costs involved? • What will be the market potential? The report initially talks about the bakery industry as a whole with descriptions of biscuit as well as bread industry separately. It further identifies potential customers for the bakery industry along with key customer forecasts. One of the crucial factors to be assessed before investing in a sector is the market potential of the product. The report helps in analyzing the market potential by elaborating on various factors that will contribute to the consumption growth of bakery products in India, import-export markets of the products as well as market size and outlook of the industry. It also includes graphical representation and forecasts of key data indicators mentioned above. It further throws light on the regulatory environment of the industry by covering excise rates, customs duty, licenses required and also the ministries involved in the bakery sector in India. The report turns the limelight

towards project details of a bakery plant. It encapsulates aspects like raw materials required, list of machinery required for bakery plant, manufacturing processes of various bakery products and project financials of a model project with specified product list and capacity. Project financials like plant capacity, costs involved in setting up of project, working capital requirements, payback period, projected revenue and profit are listed in the report. It also lists down the key players in the bakery segment along with their contact details. This report helps an entrepreneur gain meaningful insights into the Indian bakery industry and make informed and sound business decision. Reasons for buying the report:

- This report helps you to identify a profitable project for investing or diversifying into by throwing light to crucial areas like industry size, demand of the product and reasons for investing in the product
- This report provides vital information on the product like its definition, characteristics and segmentation
- This report helps you market and place the product correctly by identifying the target customer group of the product
- This report helps you understand the viability of the project by disclosing details like raw materials required, manufacturing process, project costs and snapshot of other project financials
- The report provides a glimpse of important taxes applicable on the product
- The report provides forecasts of key parameters which helps to anticipate the industry performance and make sound business decisions

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- The market forecasts are developed on the basis of secondary research and are cross-validated through interactions with the industry players
- We use reliable sources of information and databases. And information from such sources is processed by us and included in the report

# Market Research Report on Milk Processing & Dairy Products in India (Butter, Yogurt, UHT Milk, Cheese, Ice Cream, Ghee & Other Products)



**Author:** NPCS Team

**Format:** Paperback

**Book Code:** NI276

**Pages:** 120

**ISBN:** 9789381039496

**Price: Rs.** 29,500.00 **US\$** 600.00

Market Research Report on Milk Processing & Dairy Products in India (Butter, Yogurt, UHT Milk, Cheese, Ice Cream, Ghee & Other Products) Market Prospects, Present Scenario, Growth Drivers, Demand-Supply Statistics, Industry Size, Sector Outlook, Analysis & Forecasts upto 2017 If you find yourself bewildered by innumerable variants of cheese, flavored yogurts, ice creams or UHT milk, in an expansive section of a modern retail store, then assume that you have hit the much evolved dairy section. Gone are the days when shopping of dairy products just meant choosing between plain curd or Cottage Cheese or basic sandwich spread, today dairy products have outdone their first forms and evolved into much urbanized and modern consumer centric products. To establish a better understanding of market potential of the evolved dairy products in India, Niir Project Consultancy Services has released a new study titled 'Market Research Report on Milk Processing & Dairy Products in India (Butter, Yogurt, UHT Milk, Cheese, Ice Cream, Ghee & Other Products)- Market Prospects, Present Scenario, Growth Drivers, Demand-Supply Statistics, Industry Size, Sector Outlook, Analysis & Forecasts upto 2017'. The report identifies the current & future market prospects of dairy products, the value drivers that will trigger the growth, opportunities & challenges faced by the sector coupled with government initiatives and porters 5 forces analysis of the industry. It helps you classify dairy industry on the basis of its business attractiveness and investment potential which can prove to be a vital link in prudent business decision making. The report provides a comprehensive analysis of the dairy products sector along with the financial details of dairy products companies. It begins by a brief on global dairy sector and then proceeds to discuss the Indian scenario of dairy industry in detail. It discusses the present scenario, structure and classification of the industry while defining the scope of the report. The sector has moved away from large consumption of milk in unprocessed and fluid form to higher intake of processed dairy products. The known factors for such rising preference for processed dairy products include growing disposable incomes, urbanization, spiraling trend of modern retail and growing acceptability of processed products. The report analyzes the above mentioned factors in growth drivers section supported by graphical representation and forecasts of data points. Growing population of middle

class households pose immense opportunities for a host of consumer industries; dairy being one of them. With higher incomes in their pockets and growing western influence on their taste buds, Indian middle class is well equipped to experiment with new products which will have a domino effect on the consumption of dairy products. Also, growing health consciousness among Indian population, low per capita consumption of various dairy products and rising food expenditure will provide ample opportunities for dairy players to seize. Further the report discusses various impediments faced by the dairy players while operating in the industry. The report in its entirety can prove to be an indispensable tool for assessing the market potential of dairy products in India. It analyzes the demand supply situation in the industry from different angles to enable better understanding of the topic. Demand for dairy products in India is captured by determining the demand for various dairy products as well as total exports. Similarly supply side is taken into account by assessing the production of milk in the country and population of milch animals, the production of various dairy products and lastly by scrutinizing the capital expenditure projects announced in the industry. Moving forward, the report analyzes the attractiveness of the sector by evaluating the status of porter's 5 forces prevalent in the industry. Any sector is said to be most attractive when the 5 forces are at their weakest and the report explicates the forces methodically to simplify the analysis. It also lists various initiatives undertaken by the Indian government to assist dairy industry as a whole. Lastly to give a fair view of the competition in the industry, the report shares information about players operating in the dairy sector. It gives business profiles of key players like Amul, Parag Milk Foods Ltd, Kwality Ltd and Mother Dairy Fruit & Vegetable Ltd. The next segment provides complete financial details of dairy players in the country like address of registered office, director's name and financial comparison covering balance sheet, profit & loss account and several financial ratios of the players. The report ends with a promising outlook of the sector. Indian dairy industry has been at the forefront with impressive growth rates and immense potential for an effervescent future abetted by rising demand for value added dairy products in the country. Fluid milk market in India has reached a saturation point and the growing acceptance of value added dairy products has brought winds of change for the industry. The Indian market has witnessed a spur in the demand of value added dairy products like cheese, yogurt, packaged milk and probiotic drinks which has invigorated the growth in overall dairy industry. Rising western influence on Indian food habits, rising concerns about quality of dairy products, health consciousness

and spiraling disposable incomes of consumers have resulted in higher demand for value added dairy products in India. Gauging the high demand potential in dairy products industry, a host of international and domestic players have set their foot in the Indian dairy domain. The share of milk processed in total milk produced has shown a healthy rise in the last 3-4 years. We anticipate the quantity of milk processed to cross 107 million tonnes by 2017 from ~66 million tonnes in 2013. Also we expect Indian dairy market to touch INR 6971 billion levels by 2017. Reasons for Buying this Report: • This research report helps you get a detail picture of the industry by providing overview of the industry along with the market definition, structure and its classification • The report provides in-depth market analysis covering major growth driving factors for the industry and opportunities & challenges prevalent • This report helps to understand the present status of the industry by elucidating a comprehensive porter 5 force analysis and scrutiny of the demand – supply situation • Report provides analysis and in-depth financial comparison of major players/competitors • The report provides forecasts of key parameters which helps to anticipate the industry performance Our Approach: • Our research reports broadly cover Indian markets, present analysis, outlook and forecast for a period of five years. • The market forecasts are developed on the basis of secondary research and are cross-validated through interactions with the industry players • We use reliable sources of information and databases. And information from such sources is processed by us and included in the report

**Emerging Investment Opportunity in Burgeoning Indian Milk Processing & Dairy Products Sector (Why to Invest, Business Prospects, Core Project Financials, Potential Buyers, Market Size & Industry Analysis)**

**Author:** NPCS Team

**Format:** Paperback

**Book Code:** NI277

**Pages:** 47

**ISBN:** 9789381039502

**Price:** Rs. 29,500.00 **US\$** 500.00

While expanding a current business or while venturing into new business, entrepreneurs are often faced with the dilemma of zeroing in on a suitable product/line. And before diversifying/venturing into any product, they wish to study the following aspects of the identified product: • Good Present/Future Demand • Export-Import Market Potential • Raw Material & Manpower Availability • Project Costs and Payback Period We at NPCS, through our reliable expertise in the project consultancy and market research field, have identified dairy products project which satisfies all the above mentioned requirements and has high growth potential in the Indian markets. Niir Project Consultancy Services through its recently released report titled 'Emerging Investment Opportunity in Burgeoning Indian Milk Processing & Dairy Products Sector (Why to Invest, Business Prospects, Core Project Financials, Potential Buyers, Market Size & Industry Analysis)' aims to help you make sound and informed business decision before deploying your valuable resources. The report encapsulates all the vital information which can help an entrepreneur precisely evaluate the market potential and business prospects of dairy products sector. The report begins with the view of enhancing the basic industry knowledge of an entrepreneur by discussing the Indian dairy industry in brief. It disseminates information like its classification, structure and present scenario. Further, the next step report claims to be of paramount importance is the identification of potential consumers for the product to be launched. It identifies target consumer group for the dairy products industry supported by the forecasts of the same. The sections that form the very core of the report and are important factors for choosing an industry are the market potential of the industry and project details of the related plant. The report analyzes the market potential of the dairy products industry in 'Reasons for Investing' and 'Outlook' segment, where it discusses exhaustively the factors that will drive the growth of the industry and the opportunities existing for it. The factors are methodically explained supported by graphical representation and forecasts of key data indicators. The market size of the Indian dairy industry is expounded in the outlook section which further can be an effective tool for assessing the market potential of the industry. Turning towards the other important core, the report provides project details for a dairy products plant. It provides project financials of a model project with

specified product list and plant capacity along with excise and customs duty rates for dairy products for year 2013-14. The information that can be found in this section is raw materials required for dairy products, manufacturing process of various dairy products, list of machinery and basic project financials. Project financials like plant capacity, costs involved in setting up of project, working capital requirements, projected revenue and profit are listed in the report. The above mentioned project details are for dairy products plant producing Cottage cheese, flavored milk, butter, ghee, milk powder and condensed milk. The report also provides key players in the segment with their contact details. The Indian market has witnessed a spur in the demand of value added dairy products like cheese, yogurt, packaged milk and probiotic drinks which has invigorated the growth in overall dairy industry. Rising western influence on Indian food habits, rising concerns about quality of dairy products, health consciousness and spiraling disposable incomes of consumers have resulted in higher demand for value added dairy products in India and has made the sector an attractive opportunity for investment. Reasons for buying the report:

- This report helps you to identify a profitable project for investing or diversifying into by throwing light to crucial areas like industry size, market potential of the product and reasons for investing in the product
- This report provides vital information on the product like its definition, characteristics and segmentation
- This report helps you market and place the product correctly by identifying the target customer group of the product
- This report helps you understand the viability of the project by disclosing details like raw materials required, manufacturing process, project costs and snapshot of other project financials
- The report provides a glimpse of important taxes applicable on the product
- The report provides forecasts of key parameters which helps to anticipate the industry performance and make sound business decisions

Our Approach:

- Our research reports broadly cover Indian markets, present analysis, outlook and forecast for a period of five years.
- The market forecasts are developed on the basis of secondary research and are cross-validated through interactions with the industry players
- We use reliable sources of information and databases. And information from such sources is processed by us and included in the report

**Market Research Report on Packaged Fruit Juices & Drinks in India  
(Present & Future Potential, Market Insights, Growth Drivers,  
Opportunities, Industry Size, Porters 5 Forces, Demand Analysis &  
Forecasts upto 2017)**

**Author:** NPCS Team

**Format:** Paperback

**Book Code:** NI281

**Pages:** 84

**ISBN:** 9789381039540

**Price:** Rs. 35,400.00 US\$ 750.00

Fruit beverages in India have come a long way since their first forms to find their permanent place in Indian households. Today you will find yourself bewildered with the choices available if you wish to drink a fruit beverage. Innumerable and eclectic flavors combined with several variants (juices, drinks or nectars), is a testament to the fruit beverage industry transformation. In the view of the rising future potential of the industry, Niir Project Consultancy Services has released a new research report titled "Market Research Report on Packaged Fruit Juices & Drinks in India (Present & Future Potential, Market Insights, Growth Drivers, Opportunities, Industry Size, Porter's 5 Forces, Demand Analysis & Forecasts upto 2017)". The report aims at providing a thorough understanding and analysis of the industry by deeply exploring the present status as well as the future prospects of the fruit beverage sector in India in the wake of evolving market dynamics. The report establishes the study by covering data points like growth drivers for the industry, opportunities, present scenario, demand supply estimation & analysis, porters 5 force analysis and key player information. The report begins with a brief on global status of the fruit beverage industry and then shares information on the current status of the industry on the domestic front. The report discusses the overview of the sector along with its classification and structure and then further proceeds to analyze the growth drivers and opportunities for the industry. Rising per capita incomes of the Indians, bulging middle class, surging modern trade and growing urbanization will be the macro economic factors that will contribute to its growth. Escalating health consciousness among Indians has lured them towards fruit beverages and the players have left no stone unturned in capturing this sudden rush of demand. Although the fruit beverage industry is dominated by the loose beverage segment, the share of packaged fruit beverages is gradually rising and eating away the other share. The report then discusses the demand-supply scenario of packaged fruit beverages in India by analyzing various aspects. The demand for packaged fruit beverages is captured by studying the consumption volumes and the industry revenues while the supply side involves scrutiny of estimated fruit processing units in the country along with the fruit production statistics of India. The data discussed above is supported by graphical representations wherever necessary along with the key



forecasts. Moving forward, the report analyzes the attractiveness of the sector by evaluating the status of porters 5 forces prevalent in the sector. The sector is said to be most attractive when the 5 forces are their weakest and the report explicates the forces methodically to simplify the analysis. The next segment of the report includes industry players details like key player business profile and financial comparison of companies operating in this segment. Profiles of companies like Dabur India, PepsiCo India, Coca-Cola India and Parle Agro are included while peer group financials includes contact information like address of registered office, director's name and financial comparison covering balance sheet, profit & loss account and several financial ratios of the players. The report ends with a promising outlook of the sector. The fruit beverage industry in India is on its mark for a great run to success. Changing consumer dynamics like rising incomes, shifting preferences towards healthy drinks and changing perceptions will contribute majorly for the industry's next growth phase. Macro-economic factors like spurt in the modern trade, growing urbanization in the nation and burgeoning middle class will further lend a helping hand to the sector.

Reasons for Buying this Report:

- This research report helps you get a detail picture of the industry by providing overview of the industry along with the market structure and its classification
- The report provides in-depth market analysis covering major growth driving factors for the industry and opportunities prevalent
- This report helps to understand the present status of the industry by elucidating a comprehensive scrutiny of the demand – supply situation with forecasts and porters 5 force analysis
- Report provides analysis and in-depth financial comparison of major players/competitors
- The report provides forecasts of key parameters which helps to anticipate the industry performance

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# How and Why to Start Your Own Fruit Beverage Industry

**Author:** NPCS Team

**Format:** Paperback

**Book Code:** NI282

**Pages:** 36

**ISBN:** 9789381039557

**Price:** Rs. 29,500.00 **US\$** 500.00

How and Why to Start Your Own Fruit Beverage Industry (Business Plan, Investment Opportunity, Why to invest, Market Potential, Project Financials of Fruit Juice Plant (FMCG Sector) for Indian entrepreneur, Project Feasibility, Potential Buyers, Market Size & Analysis) Indian fruit beverage industry has an effervescent future ahead of itself with rising health consciousness and growing affordability among Indians. The industry is in the pink of its health as fruit beverage consumption levels grows among Indian population and makes way for newer variants and flavors in the segment. Acknowledging the growth potential of fruit beverages in India, Niir Project Consultancy Services has launched its new report titled “How and Why to Start Your Own Fruit Beverage Industry (Business Plan, Investment Opportunity, Why to invest, Market Potential, Project Financials of Fruit Juice Plant (FMCG Sector) for Indian entrepreneur, Project Feasibility, Potential Buyers, Market Size & Analysis)”. The report qualifies as an investor’s guide for making investment into Indian fruit beverage segment. While expanding a current business or while venturing into new business, entrepreneurs are often faced with the dilemma of zeroing in on a suitable product/line. And before diversifying/venturing into any product, they wish to study the following aspects of the identified product: • Good Present/Future Demand • Export-Import Market Potential • Raw Material & Manpower Availability • Project Costs and Payback Period We at NPCS, through our reliable expertise in the project consultancy and market research field, have demystified the situation by putting forward the emerging business opportunity in fruit beverage sector in India and its business prospects. Through this report we have identified Fruit Juice project which has the potential to be a lucrative investment avenue. The report analyzes the investment feasibility of fruit beverage sector by discussing factors like potential buyers, reasons for investment, regulations, foreign trade and project financials. The report embarks the assessment by giving an overview of the overall fruit beverage sector in India as well as in world which is followed by the identification, estimation and forecasts of target consumers of the industry in India. The report further elaborates on factors that make a case for investing in the sector by profound analysis supported by graphical representation and forecasts of key data indicators. Evolving consumer dynamics like changing preferences, growing health consciousness and

increasing consumption levels will bring in the next phase of growth for the industry. The report then lists the import-export market of the products and the recent developments in the sector. The key segment of the report 'Project Details' is a useful tool for any entrepreneur who is willing to enter fruit beverage segment in India as it discusses investment vitals like raw materials required, list of machinery, manufacturing process and project financials of the project. The report includes project details of a model project manufacturing four types of fruit juices (Pineapple, Orange, Banana and Guava). The project financial sub section provides details like plant capacity, costs involved in setting up of project, working capital requirements, payback period, projected revenue and profit. It also provides contact details of major players operating in the Indian fruit beverage sector. The fruit beverage industry in India is on its mark for a great run to success. Changing consumer dynamics like rising incomes, shifting preferences towards healthy drinks and changing perceptions will contribute majorly for the industry's next growth phase. Macro-economic factors like spurt in the modern trade, growing urbanization in the nation and burgeoning middle class will further lend a helping hand to the sector. Reasons for buying the report:

- This report helps you to identify a profitable project for investing or diversifying into by throwing light to crucial areas like industry size, market potential of the product and reasons for investing in the product
- This report provides vital information on the product like it's characteristics and segmentation
- This report helps you market and place the product correctly by identifying the target customer group of the product
- This report helps you understand the viability of the project by disclosing details like machinery required, project costs and snapshot of other project financials
- The report provides a glimpse of important taxes applicable on the industry
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# [The Complete Book on Biomass Based Products \(Biochemicals, Biofuels, Activated Carbon\)](#)

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

**Format:** Hardcover

**Book Code:** NI289

**Pages:** 417

**ISBN:** 9788178331584

**Price: Rs. 1,575.00 US\$ 150.00**

Biomass use is growing globally. Biomass is biological material derived from living, or recently living organisms. It most often refers to plants or plant-based materials which are specifically called lignocellulosic biomass. Biomass (organic matter that can be converted into energy) may include food crops, crops for energy, crop residues, wood waste and byproducts, and animal manure. It is one of the most plentiful and well-utilized sources of renewable energy in the world. Broadly speaking, it is organic material produced by the photosynthesis of light. The chemical materials (organic compounds of carbons) are stored and can then be used to generate energy. The most common biomass used for energy is wood from trees. Wood has been used by humans for producing energy for heating and cooking for a very long time. As an energy source, biomass can either be used directly via combustion to produce heat, or indirectly after converting it to various forms of biofuel. Conversion of biomass to biofuel can be achieved by different methods which are broadly classified into: thermal, chemical, and biochemical methods. Biomass gasification is the conversion of solid fuels like wood and agricultural residues into a combustible gas mixture. The gasification system basically consists of a gasifier unit, a purification system and energy converters- burner or engine. This book offers comprehensive coverage of the design and analysis of biomass gasification, the key technology enabling the production of biofuels from all viable sources like sugar beet and sweet sorghum. It aims at creating an understanding of the nature of biomass resources for energy and fuels, the variety of processes that are available for conversion of the wastes into energy or fuels. The book discusses the overview of the Biomass Energy along with their Properties, Composition, Benefits, Characteristics and Manufacturing Process of Biomass based products. Also it contains suppliers contact details of plant & machinery with their photographs. The content includes biomass renewable energy, prospective renewable resources for bio-based processes, biochemical from biomass, biomass based chemicals, biofuel production from biomass crops, biomass gasification, reuse of bio-genic iron oxides and woody biomass fly ash in cement based materials and agricultural areas, biofuel briquettes from biomass, biomass based activated carbon, environmental aspects. It will be a standard reference book for Professionals,

Decision-makers, Engineers, those studying and researching in this important area and others interested in the field of biomass based products. Professionals in academia and industry will appreciate this comprehensive and practical reference book, due to its multidisciplinary nature.

# [The Complete Book on Onion & Garlic Cultivation with Processing \(Production of Onion Paste, Flakes, Powder & Garlic Paste, Powder, Flakes, Oil\)](#)

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

**Format:** Paperback

**Book Code:** NI290

**Pages:** 416

**ISBN:** 9788178331591

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

"Onion and garlic are the spice commodities used for flavouring the dishes. These are considered as valuable medicinal plants offer variety of medicinal properties. Onion & garlic are important commercial crops with versatile applications. The demand for the processed products is increasing day by day due to its convenience to handle and use. Onion & garlic can be processed into a wide variety of products. As per the estimate, approximately 6.75% of the onion produced is being processed. Besides fulfilling the constant demand of domestic population, India exports 13 to 18 lakh tons of onion annually worth around Rs. 2200 crores of foreign exchange revenue. Similarly in case of garlic, the production increased from 4.03 lakh tons to 12.26 lakh tons. Proper placement of onion & garlic products (like; onion pickle, onion chutney, onion paste, garlic oil, garlic paste, garlic powder, garlic flakes, onion flakes, onion powder) in the departmental stores, super markets, shopping malls backed-up by publicity is the key to success. It is also possible to have tie-up with exclusive restaurants, star hotels, renowned caterers for their regular requirements. This handbook is designed for use by everyone engaged in the onion & garlic products manufacturing. The book explains manufacturing process with flow diagrams of various onion & garlic products and addresses of plant & machinery suppliers with their photographs. Major contents of the book are varieties of onion, onion production, onion dehydration, types of garlic, garlic growing, garlic dehydration, onion pickle, onion chutney, onion paste, garlic oil, garlic paste, garlic powder, garlic flakes, onion flakes, onion powder, pest species and pest control of garlic and onion, integrated weed management, packaging, product advertising and sales promotion, marketing etc. It will be a standard reference book for professionals, entrepreneurs, food technologists, those studying and researching in this important area and others interested in the field of onion & garlic products manufacturing. "



**The Complete Book on on Tomato & Tomato Products  
Manufacturing (Cultivation & Processing)(2nd Revised Edition)**

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

**Format:** Paperback

**Book Code:** NI294

**Pages:** 344

**ISBN:** 9789381039687

**Price:** Rs. 1,400.00 **US\$** 150.00

Tomato is one of the most popular fruit in the world. The products of tomato like paste, juice, ketchup, etc. are widely used in kitchens all around the world. Tomatoes and tomato-based foods are considered healthy for the reason that they are low in calories, but possess a remarkable combination of antioxidant micronutrients. Tomato industry has been growing significantly over the past several decades. Changing life style and taste of consumers in different countries will motivate the growth of the tomato products market. The industries can retain maximum market share by differentiating their products in the market, by coming up with innovative products and by focusing on different packaged tomato products. India is one of the largest consumers of tomatoes, as well as the second largest tomato producing country in the world followed by China. Although raw tomato consumption is the mainstream means of consumption in today's India, the market for processed tomato is expected to expand in the near future considering the remarkable economic growth and dietary culture changes. Tomatoes are widely grown commodity with 136 mt production in the world. There is a big market for tomato products. The market scenario has revealed a positive indication for the specially packed tomato products in local as well as outside market. It is estimated that the total production of processed fruit & vegetable in India is about 15.0 lakh tonne. The major content of the book are varieties of tomato, select the best seeds and seedlings, growing preparation, canning of tomatoes, how to store & preserve tomatoes, basis for successful cultivation of tomato, crop husbandry, tomato pruning, dehydration/drying of tomatoes, canning of tomatoes, preserving by heating, tomato pulp, tomato paste, tomato ketchup, tomato juice, tomato powder, hazard analysis and critical control points, FPO and Agmark, products packaging, marketing. The purpose of this book is to present the elements of the technology of tomato preservation. The book explains raw material requirement, manufacturing process with flow diagrams of various tomato products with addresses of plant & machinery suppliers with their photographs. It deals with the products prepared from tomato commercially. It will be a standard reference book for professionals, entrepreneurs, food technologists, those studying and researching in this important area and others interested in the field of tomato products manufacturing.

# Manufacture of Value Added Products from Rice Husk (Hull) and Rice Husk Ash (RHA)(2nd Revised Edition)

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

**Format:** Paperback

**Book Code:** NI304

**Pages:** 212

**ISBN:** 9789381039809

**Price:** Rs. 1,400.00 US\$ 150.00

Manufacture of Value Added Products from Rice Husk (Hull) and Rice Husk Ash (RHA) (Precipitated Silica, Activated Carbon, Cement, Electricity, Ethanol, Hardboard, Oxalic Acid, Paper, Particle Board, Rice Husk Briquettes, Rice Husk Pellet, Silicon, Sodium Silicate Projects)(2nd Revised Edition)

Rice husk is the outermost layer of protection encasing a rice grain. Rice husk was largely considered a waste product that was often burned or dumped on landfills. Many ways are being thought for disposal of rice husk and only a small quantity of rice husk is used in agricultural field as a fertilizer, or as bedding and for stabilisation of soils. Therefore, the use of rice husk as rice husk ash is one of the most viable solution. The husk can be used for poultry farming, composting or burning. In the case of burning, it has been used as biomass to power reactors to generate thermal or electrical energy. India is a major rice producing country and the husk generated during milling is mostly used as a fuel in the boilers for processing paddy, producing energy through direct combustion and / or by gasification. The rice husk ash causes more environmental pollution and its disposal becomes a problem, hence requires attention regarding its disposal and its reuse. The ash is mainly composed of carbon and silica due to which it is used to manufacture different value added products. This book provides thorough information to utilize RHA with process pathway for economically valuable products. This handbook explains manufacturing process with flow diagrams of various value added products from rice husk & rice husk ash, photographs of plant & machinery with supplier's contact details and sample plant layout & process flow sheets. The major contents of the book are rice husk, rice husk ash RHA), precipitated silica from rice husk ash, activated carbon from rice husk, cement from rice husk ash, electricity from rice husk, ethanol from rice husk, hardboard from rice husk, oxalic acid from rice husk, paper from rice husk, particle board from rice husk, rice husk briquettes, rice husk pellet, silicon from rice husk, sodium silicate from rice husk, packaging. This book will be a mile stone for the entrepreneurs, existing units, professionals, libraries and others interested in recovery of value added products from rice husk (rice hull) & rice husk ash to explore an economic way for recycle and reuse of agricultural waste.

**Handbook on Manufacture of Indian Kitchen Spices (Masala Powder) with Formulations, Processes and Machinery Details- 2nd Revised Edition**

**Author:** NPCS Board of Food Technologists

**Format:** Paperback

**Book Code:** NI307

**Pages:** 312

**ISBN:** 9789381039847

**Price:** Rs. 1,695.00 **US\$** 150.00

Handbook on Manufacture of Indian Kitchen Spices (Masala Powder) with Formulations, Processes and Machinery Details (Chaat Masala, Sambar Masala, Pav Bhaji Masala, Garam Masala, Goda Masala, Pani Puri Masala, Kitchen King Masala, Thandai Masala Powder, Meat Masala, Rasam Powder, Kesari Milk Masala, Punjabi Chole Masala, Shahi Biryani Masala, Tea Masala Powder, Jaljeera Masala, Tandoori Masala, Fish Curry Masala, Chicken Masala, Pickle Masala, Curry Powder) (2nd Revised Edition) Spices or Masala as it is called in Hindi, may be called the “heartbeat” of an Indian kitchen. The secret ingredient that makes Indian food truly Indian is the generous use of signature spices. From ancient times of the maharaja’s, spices have added unforgettable flavours and life to Indian cuisine. Indian spices offer significant health benefits and contribute towards an individual's healthy life. They add flavor and nutrients to dishes without fat or calories! A spice may be available in several forms: fresh, whole dried, or pre-ground dried. Generally, spices are dried. A spice is a seed, fruit, root, bark, berry, bud or other vegetable substance primarily used for flavoring, coloring or preserving food. Spices are distinguished from herbs, which are parts of leafy green plants used for flavoring or as a garnish. Many spices have antimicrobial properties. Spices produce a vast and diverse assortment of organic compounds, the great majority of which do not appear to participate directly in growth and development. There are a large number of various spices, used along with food such as Chilli (Mirchi), Turmeric (Haldi), Coriander (Dhania), Cumin (Jeera), Mustard (Rai), Fenugreek (Methi), Sesame (Til), Cardamon, Peppercorns (Kali Mirchi), Clove, Fennel (Saunf), Nutmeg and Mace etc. These spices give taste to the prepared food and at the same time give attractive colours and smell to the food. Today, Indian spices are the most sought-after globally, given their exquisite aroma, texture, taste and medicinal value. India has the largest domestic market for spices in the world. Traditionally, spices in India have been grown in small land holdings, with organic farming gaining prominence in recent times. India is the world's largest producer, consumer and exporter of spices. Demand for Indian spices is high because they are clean and hygienic as compared to that of other countries. In modern times, international trade in spices and condiments

have increased dramatically which could be attributed to several factors including rapid advances in transportation, permitting easy accessibility to world markets, growing demand from industrial food manufacturers of wide ranging convenience foods which are either ready to eat or requiring minimal preparation time in the household, migration of large number of people of different ethnicity with their traditional food habits, to meet the changing requirements of industry and commerce and exposure to culinary delicacies of other regions of the world by increasing business and tourism travel. As the demand for Indian spices is increasing day by day, Indian manufacturers are producing spices of high quality. The book presents the fundamental concepts of Spices (Masala Powder) Indian Kitchen Spices product mix in a manner that new entrepreneurs can understand easily. It covers Formulation for spices i.e., Chaat Masala, Chana Masala, Sambar Masala, Pav Bhaji Masala, Garam Masala, Goda Masala, Pani Puri Masala, Kitchen King Masala, Thandai Masala Powder, Meat Masala, Rasam Powder, Kesari Milk Masala, Punjabi Chole Masala, Shahi Biryani Masala, Tea Masala Powder, Jaljeera Masala, Tandoori Masala, Fish Curry Masala, Chicken Masala, Pickle Masala, Curry Masala. This book contains manufacturing process, Packaging and Labelling of Spices. The highlighting segments of this book are Spices Nutritional value, Special Qualities and Specifications, Cryogenic Grinding Technology, Food Safety & Quality, BIS Specifications, Quality Control, Market, Sample Production Plant Layout and Photograph of Machinery with Supplier's Contact Details. It also covers Good manufacturing practices in Food Industry, Case Study for Everest and MDH Masala and Top Spice Brands of India. This book is aimed for those who are interested in Spices business, can find the complete information about Manufacture of Indian Kitchen Spices (Masala Powder). It will be very informative and useful to consultants, new entrepreneurs, startups, technocrats, research scholars, libraries and existing units.

## [Indian Buyers Directory/ Database /List of Agricultural Products \(Processed Food, Edible Oil, Commodities, Etc.\) \(with Financial Data\)](#)

**Format:** CD-Rom

**Book Code:** NID208

**Price:** Rs. 4,130.00 **US\$** 150.00

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## [The Complete Book on Ginger Cultivation and Manufacture of Value Added Ginger Products \(Ginger Storage, Ginger Oil, Ginger](#)



**Powder, Ginger Paste, Ginger Beer, Instant Ginger Powder Drink and Dry Ginger from Green Ginger)**

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

**Format:** Paperback

**Book Code:** NI308

**Pages:** 352

**ISBN:** 9789381039854

**Price: Rs. 1,575.00 US\$ 150.00**

Ginger is the common name for *Zingiber officinale*, which was originally cultivated in China and now equally spread around the world. Ginger is a herb but is often known as a spice, with a strong distinct flavor that can increase the production of saliva. The part that is used as spice on the plant itself is the rhizomes or ginger root. This ginger root is traditionally used with sweet foods in Western cuisine being included in popular recipes such as ginger ale, gingerbread, ginger biscuits and ginger cake. It is also used in many countries as a medicinal ingredient which many believe in. Historically, ginger has a long tradition of being very effective in alleviating symptoms of gastrointestinal distress. In herbal medicine, ginger is regarded as an excellent carminative and intestinal spasmolytic. Modern scientific research has revealed that ginger possesses numerous therapeutic properties including antioxidant effects, an ability to inhibit the formation of inflammatory compounds, and direct anti-inflammatory effects. India is the leading producer of ginger oil and dominates the ginger oil market with almost half shares out of total market. China is also known for ginger production and trade of ginger oil. Asia Pacific mainly exports ginger oil to North America and European markets. Increasing number of health conscious consumers, and their demands for natural oils and extracts based products is the major factor driving growth for essential oils and in turn ginger oil market. Ginger is majorly used in spices and thus ginger oils and oleoresins are preferred to prepared dried spices as flavoring in food industry, because they are more stable, contamination free, cleaner and can be easily standardized by blending. Thus the growth of food industry and spices demand are another factors driving growth of ginger oil market. The growth of natural personal care products industry is another growth driver for ginger oil market. The major content of the book are Ginger Cultivation, Farm and Forestry Production for Ginger, Diseases & Pest Management in Ginger, Medicinal Values of Ginger, Active Ingredients of Ginger, Pharmacological Activity of Ginger, Ginger Storage, Ginger Processing, Ginger Oleoresin, Ginger Oil, Ginger Beer, Ginger Powder, Ginger Paste, Instant Ginger Powder Drink, Ginger Candy, Dry Ginger from Green Ginger, Extraction of Ginger Oleoresin from Ginger-Root Using Co<sub>2</sub>, Production of Ginger Rhizome by Shoot-Tip Culture, Extraction of Essential Oils from Ginger Rhizome

Using Steam Distillation Method, Packaging and Labelling BIS Specifications, Good Manufacturing Practices, Sample Plant Layouts, Photographs of Machinery with Suppliers Contact Details. This book will be a mile stone for its readers who are new to this sector, will also find useful for professionals, entrepreneurs, those studying and researching in this important area.

# **55 Most Profitable Micro, Small, Medium Scale Food Processing (Processed Food) Projects and Agriculture Based Business Ideas for Startup**

**Author:** NPCS Board of Food Technologists

**Format:** Paperback

**Book Code:** NI316

**Pages:** 392

**ISBN:** 9789381039908

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

Food processing is a way or technique that is used to convert raw foods into well-cooked and well preserved eatables for both humans and animals. Food processing uses raw, clean, harvested crops or slaughtered and butchered animals and turns these into food products for daily consumption. A number of products are nutritious, easy to cook and have a long shelf life. They are packed in an attractive manner and are highly marketable. The food processing industry plays a vital role in the economy of any country because it links agriculture to industry. The food processing industry is responsible for diversification of agriculture, improvement of value-added opportunities, and creation of excess that can be exported. The food processing industry of India is one of the largest in the world in terms of manufacture, use, export, and development. The sector has immense potential to contribute to growth and employment opportunities of the country. Rapid globalization and development of economy has taken a toll on the lives of consumers, particularly those residing in urban areas. Employment growth and increased work pressure in organizations leaves consumers with little time for personal care. Additionally, more product offerings by food companies and marketing on a large scale has altered people's appetite- they demand more and more processed food items every day. These are some of the reasons for the steady growth of food processing industry in India in the past few years. Some of the biggest companies making their presence felt in the Indian market are Unilever, Dabur, Nestle, Nissin, Cadbury's, Kelloggs', Godrej, ITC, Britannia, Kohinoor Foods Ltd., Mother Dairy, Pepsico India, Marico Ltd, Patanjali, MTR Foods etc. Food processing industry is of enormous significance for any country's development because with the changing lifestyle, there has been a consistent increase in preference and demand for packaged foods amongst the population. These can be seen as a great opportunity by the packaging companies. The agricultural strength amalgamated with a various other factors like competent market price and favorable government policies have further aggrandized the food packaging sector. The Major Contents of the are Book Soy Flour & Milk, Starch Derivatives, Saccharin, Tomato Paste, Edible Corn Oil, Malt, Instant Noodles, Garlic Oil and Powder, Cattle Feed, Banana Wafers, Biscuits, Bread, Candy, Chocolates, Potato Chips, Rice Flakes (Poha), Corn

Flakes, Baby Cereal Food, Fruit Juice, Milk Powder, Paneer, Papad, Ghee, Extruded Food (Kurkure Type), Instant Tea, Jam & Jelly, Khakhra, Soft Drinks, Spices, Sweet Scented Supari, Cake & Pastry, Banana Chips, Papad, Besan, Pickles, Ice-Cream Cones, Honey, Flour Mill, Tutti-Fruitti, Confectionery, Noodles, Ice Candy, Namkeen, Vermicelli, Mango Pappad (Aam Papad), Chilli Powder, Popcorn, Supari Chips, Revadi and Gazak, Mava, Tomato Sauce and Ketchup, Ice Cream, Baking Powder, Moong Dal Bari, Packaged Drinking Water With Pet Bottles, Food Packaging & Labelling, Good Manufacturing Practices in Food Industry, Manufacturing Process, Process Flow Diagrams, Addresses of Plant & Machinery Suppliers, Photographs of Machineries. It will be a standard reference book for professionals, entrepreneurs, agriculturists, agriculture universities, food technologists, those studying and researching in this important area and others interested in the field of Food products manufacturing.













# Manufacture of Pan Masala, Tobacco and Tobacco Products

**Author:** NPCS Board of Food Technologists

**Format:** Paperback

**Book Code:** NI317

**Pages:** 448

**ISBN:** 9789381039915

**Price:** Rs. 1,975.00 US\$ 200.00

Manufacture of Pan Masala, Tobacco and Tobacco Products (Tobacco Cultivation, Chewing Tobacco, Cigarettes, Bidi, Cigars, Khaini, Zarda, Gutka, Katha, Mouth Freshner, Pan Chatni, Kimam, Sweet Supari, Nicotine Sulphate, USP Nicotine, Nicotine Tartarate, Nicotine, Polacrilex Resin)

Tobacco comes from a leafy plant that tends to grow in warm tropical areas. It is famously grown all over the Caribbean, where the warm, sunny conditions make for a perfect growing climate. Tobacco is usually smoked as a nicotinic stimulant and is mostly processed, rolled and dried before being smoked. Different geographies produce different types of the plant. The taste and flavor of the leaves are the characteristic trademarks of different types. The process of curing also determines the type of tobacco. Tobacco products include cigarettes, cigars, loose pipe tobacco, chewing tobacco, and snuff. These products contain the dried, processed leaves of the tobacco plant *nicotiana rustica* or *nicotiana tabacum*. All tobacco contains nicotine, an addictive drug. Today's tobacco also contains thousands of other chemicals designed to make the products more user-friendly and addictive. Nicotine is a nitrogen-based compound which dissolves in organic compounds. Tobacco leaves contain plenty of nicotine which evaporates on burning. This nitrogen-based compound is addictive in low amounts and toxic in high doses. Nicotine Sulfate is a potent pesticide, known for its high toxicity. A large proportion of Indian economy is agro based in which Tobacco is one of the principal cash crops. The tobacco production and its allied products' sales in the country have played a prominent role in the development of nation's economy. India is the largest tobacco market in the world in terms of tobacco consumption. The smokeless tobacco has historically been served as a tradition in India for many decades. Tobacco Waste or dust is generated at various stages of post-harvest processing of tobacco and also while manufacturing various tobacco products mainly during manufacture of tobacco products like cigarette and Beedi. The types of wastes generated during pre and post-harvest practice of tobacco include suckers, stems, mid ribs, leaf waste and dust. The main contents of the book are Tobacco Cultivation, Tobacco Diseases and Pests, Organic Tobacco Production, Chewing Tobacco, Cigarettes, Bidi, Cigars, Readymade Khaini, Chewing Tobacco (Khaini), Zarda,

Gutka, Katha, Mouth Fresheners, Pan Chutney, Pan Masala, Kimam, Tobacco of Various Grade, Sweet Supari, Nicotine Sulphate, USP Nicotine, Nicotine Tartarate, Nicotine Polacrilex Resin, Smokeless Tobacco (SLT), Hookah, Tobacco Products Manufacturing Processes, E-Liquid (Main Chemicals, Compounds, Components), Additives in Tobacco Products, Additives Products, Packaging & Labeling (Design Trends & Technologies), Plastics in Food Packaging, Packaging Laws and Regulations and Photographs of Machinery with Supplier's Contact Details. This book will be a mile stone for its readers who are new to this sector, will also find useful for professionals, entrepreneurs, those studying and researching in this important area.

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Tue, 18 Dec 2018 17:30:40 +0530