106-E, Kamla Nagar, New Delhi-110007, India.
Tel: 91-11-23843955, 23845654, 23845886, +918800733955
Mobile: +91-9811043595

Email: npcs.ei@gmail.com, info@entrepreneurindia.co
Website: www.entrepreneurIndia.co

Handbook on Spices, Seasonings and Condiments Processing, Extraction with Kitchen Spices Manufacturing

Code: NI373	Format: paperback	
Indian Price: ₹2595	US Price: \$224	
Pages: 440	ISBN: 978-81-940995-6-7	
Publisher: Asia Pacific Business Press Inc.		

Description

The Spices and Condiments sector is a vital and vibrant segment of the global food industry, deeply rooted in history, culture, and commerce. Spices have been treasured since ancient times for their ability to enhance flavour, aroma, and even preserve food. Condiments, on the other hand, complement and complete dishes, making them essential components of culinary traditions across the world. Spices and condiments are not only celebrated for their culinary importance but also for their health benefits, medicinal uses, and cultural significance. They play a crucial role in traditional healing systems like Ayurveda, Traditional Chinese Medicine, and various indigenous medical practices.

The global spice and seasoning industry has seen a remarkable transformation in recent years, driven by increasing consumer awareness of natural flavors, health-conscious eating habits, and the surge in demand for ethnic and convenience foods. With a projected growth rate surpassing USD 30 billion globally in the coming decade, the spices and condiments sector offers immense opportunities for entrepreneurs, food technologists, agricultural producers, and manufacturers.

The book is a definitive and practical guide that brings together scientific principles, traditional knowledge, industrial practices, and commercial strategies in one volume. Whether you're a startup exploring spice products, an agro-entrepreneur investing in value-added processing, or a seasoned industry player looking to diversify your product line, this book is your essential companion.

Spanning over 440 pages and meticulously curated by industry experts and technical consultants, this handbook explores the entire spectrum of spice and condiment processing. It starts with foundational topics such as Introduction to the Spice Industry, How to Start a Spices and Condiments Business, and Formulation of Spices (Masala), equipping readers with the agricultural and commercial insights required for success.

The book delves deep into processing techniques, spice extractives, and masala formulation providing readers with clear instructions on how to develop popular seasoning blends such as meat seasonings, snack seasonings, sauces, gravies, and ethnic mixtures. In a market driven by taste, innovation, and functionality, mastering these formulations is key to building a competitive product range.

Beyond generic spices, the book provides individual profiles for more than 27 essential spices, including Chilies, Cardamom, Cumin, Garlic, Ginger, Turmeric, Clove, Cinnamon, Coriander, Nutmeg, Onion, and many more. This an indispensable reference for both technical professionals and passionate culinary artisans.

For those looking to set up their own spice manufacturing units, the handbook also includes detailed photographs of machinery, supplier contact details, and plant layout diagrams, offering practical support to convert ideas into actionable business ventures.

This book highlights the rising global and domestic demand for organic and valueadded spices. With India being the largest producer and exporter of spices, the opportunities for entering both domestic and export markets are immense and this handbook helps position readers to make informed decisions in a competitive landscape.

This book is highly recommended for entrepreneurs, food technologists, agri-startups, culinary professionals, exporters, and students pursuing careers in food science and agribusiness. It is an investment that offers technical clarity, industry Insight, and strategic direction.

Content

1. Introduction

- 1.1 Comparison between Spices, condiments and seasonings
- 1.2 Spice
- 1.3 Condiments

1.3.1 Functions of Condiments

- 1.4 Seasoning 1.4.1 Characteristics of Seasonings History of spices, condiments and seasoning 1.5 India's Major Spice-Producing Regions 1.6 1.6.1 Kerala 1.6.2 Karnataka 1.6.3 Tamil Nadu 1.6.4 Andhra Pradesh and Telangana 1.6.5 Northeast India 1.6.6 Gujarat Spice-Producing Countries around the World 1.7 1.7.1 Indonesia 1.7.2 Vietnam 1.7.3 Sri Lanka 1.7.4 Madagascar 1.7.5 Mexico 1.7.6 Zanzibar, Tanzania 1.7.7 China **How to Start a Spices and Condiments Business** 2.1 Process to Start a Spice Business 2.1.1 Market Research & Competition Analysis 2.1.2 Choose Your Business Model 2.1.3 Licensing Requirements 2.1.4 Source Raw Material Vendors 2.1.5 Invest in Machinery
 - 2.2 Processing and Packaging

2.1.6

2.1.7

Position Your Products

Calculate Profit Margins

	2.3	Opportunitie	s for Starting a Spice Business in India
		2.3.1	Abundant Supply of Raw Materials
		2.3.2	Expanding Domestic and Global Market Demand
		2.3.3	Technological Advancements in Processing and Packaging
		2.3.4	Rise of E-commerce and Digital Outreach
	2.4	Challenges i	n the Spice Market: A Global Overview
		2.4.1	Evolution of Consumer Preferences
		2.4.2	Sustainability and Traceability
		2.4.3	Competition and Market Consolidation
		2.4.4	Quality Control and Food Safety
		2.4.5	Technological Advancements
	2.5	Spices Manu	facturing Process: How to Produce High Quality Spices
		2.5. 1	Cleaning and Inspection
		2.5.2	Drying
		2.5.3	Roasting
		2.5.4	Milling
		2.5.5	Mixing and Blending
		2.5.6	Packaging
	2.6	Types of Pac	kaging Commonly used in the Spice Industry
		2.6.1	Can/Jar Packaging
		2.6.2	Bottle Packaging
		2.6.3	Pouch/Bag Packaging
	2.7	What Spices	can be exported from India?
3.	Diseases of	Spice Crops	
4.	Insect-Pest	s of Spices a	nd Their Control

Spice Cleaning 5.1

5. Spice Processing

5.1.1 Magnets

- 5.1.2 Sifters 5.1.3 Air Tables 5.1.4 Destoners 5.1.5 Air Separators 5.1.6 Indent Separators 5.1.7 Spiral Separators Spice Reconditioning **Spice Grinding** 5.4.1 Ethylene Oxide 5.4.2 Propylene Oxide
- 5.4 Postprocessing Treatments
 - 5.4.3 Irradiation
 - 5.4.4 Steam Sterilization

Spice Extractives 6.

5.2

5.3

- 6.1 Spice Volatile Oils
- 6.2 **Spice Oleoresins**
- 6.3 Use of Spice Extractives
- 6.4 Replacement of Spices with Oils and Oleoresins

Production Process of Indian Kitchen Spices

- 7.1 Selection of Spices for Processing
- 7.2 Procurement of Raw Spices
- 7.3 Cleaning and Grading
 - 7.3.1 Pre-Cleaning
 - 7.3.2 Grading
- 7.4 Drying (If Needed)
- 7.5 Roasting (Optional)
- 7.6 Pulverization / Grinding
- 7.7 Blending and Mixing

		7.9	Packaging			
		7.10	Storage and Distribution			
8.	Form	ulation	n of Spices (Masala)			
		8.1	Garam Masal	a		
			8.1.1	Health Benefits		
			8.1.2	Ingredients for 100 kg Garam Masala		
		8.2	Chaat Masala	1		
			8.2.1	Health Benefits		
			8.2.2	Ingredients for 100 kg Chaat Masala		
		8.3	Pickle Masala	1		
			8.3.1	Health Benefits		
			8.3.2	Ingredients for 100 kg Pickle Masala		
		8.4	Chana Masal	a		
			8.4.1	Health Benefits		
			8.4.2	Ingredients for 100 kg Chana Masala		
		8.5	Sambar Masala			
			8.5.1	Health Benefits		
			8.5.2	Ingredients for 100 kg Sambar Masala		
		8.6	Pav Bhaji Ma	sala		
			8.6.1	Health Benefits		
			8.6.2	Ingredients for 100 kg Pav Bhaji Masala		
		8.7	Biryani Masala			
			8.8.1	Health Benefits of Biryani Masala		
			8.8.2	Ingredients for 100 kg Biryani Masala		
		8.8	Meat Masala			
			8.8.1	Health Benefits		
			8.8.2	Ingredients for 100 kg Meat Masala		

7.8

Sieving and Quality Check

8.9 Jaljeea Masala 8.9.1 Health Benefits 8.9.2 Ingredients for 100 kg Jaljeera Masala 8.10 Tea Masala 8.10.1 Health Benefits of Tea Masala 8.10.2 Ingredients for 100 kg Tea Masala **Simple Seasoning Blends** 9.1 Soluble Seasonings

9.

- 9.2 Celery Salt
- 9.3 Garlic Salt and Onion Salt
- 9.4 Chili Powder
- 9.5 **Curry Powder**
- 9.6 **Pickling Spice**
- 9.7 **Poultry Seasoning**
- 9.8 Pumpkin Pie Spice
- 9.9 Apple Pie Spice
- 9.10 Oriental Five Spice Blend

10. Meat Seasonings

- 10.1 Overview of the Industry
- 10.2 Overview of Formulating
 - 10.2.1 Meat Block
 - 10.2.2 Cure
 - 10.2.3 Curing Accelerator
 - 10.2.4 Brine
 - 10.2.5 Pickup
- Formulations 10.3
 - 10.3.1 Restricted Ingredients

- 10.3.2 Natural Flavouring Regulations
- 10.3.3 Seasoning Formulas
- 10.3.4 Fresh Sausage
- 10.3.5 Cooked Sausage
- 10.3.6 Rubs
- 10.3.7 Dry and Semidry Sausages
- 10.3.8 Brines

11. Snack Seasonings

11.1 Overview of the Industry

- 11.1.1 All Natural/No MSG
- 11.1.2 Low Calorie-Snacks
- 11.1.3 Unique Flavours
- 11.1.4 Multigrain Chips

11.2 Overview of Formulating

- 11.2.1 Will the Seasoning be Topically Applied or Applied in an Oil Slurry?
- 11.2.2 What is the Base Product the Seasoning will be Used on?
- 11.2.3 Is the Base Product Salted?
- 11.2.4 What is the Target and Maximum Cost for this Seasoning?

11.3 Formulations

- 11.3.1 Potato Chips
- 11.3.2 Extruded Snacks
- 11.3.3 Tortilla and Corn Chips
- 11.3.4 Popcorn
- 11.3.5 Nuts
- 11.3.6 Rice Cakes
- 11.3.7 Pork Skins

12. Sauces and Gravies

12.1 Overview of the Industry

12.2 Overview of Formulating

12.3 Formulations

- 12.3.1 Gravies
- 12.3.2 Sauces
- 12.3.3 Tomato Based Sauces
- 12.3.4 Cream Based Sauces

13. Ethnic Seasonings

- 13.1 Introduction
- 13.2 Cajun and Creole
- 13.3 Italian
- 13.4 Mexican
- 13.5 Caribbean
- 13.6 Indian
- 13.7 Chinese
- 13.8 Others

14. Ajowan or Bishop's Weed

- 14.1 Description and Distribution
- 14.2 Composition
- 14.3 Uses

15. Anardana

- 15.1 Description and Distribution
- 15.2 Composition
- 15.3 Uses

16. Angelica

- 16.1 Description and Distribution
- 16.2 Composition

16.2.1 Root

16.2.2 Fruit
16.2.3 Peel Oil
16.2.4 Volatile Oil
Uses

17. Aniseed

- 17.1 Description and Distribution
- 17.2 Composition
 - 17.2.1 Adulteration
 - 17.2.2 Distillation of Oil
- 17.3 Uses

18. Bay or Laurel Leaves

16.3

- 18.1 Description and Distribution
- 18.2 Composition
 - 18.2.1 Volatile Oil
- 18.3 Uses

19. Capsicums or Chillies

- (i) Chillies
- 19.1 Description and Distribution
- 19.2 Uses and Nutritive Value
- 19.3 Origin and History
- 19.4 Nature of Plant
- 19.5 Pollination
- 19.6 Production Technology
 - 19.6.1 Soil
 - 19.6.2 Climate
 - 19.6.3 Sowing Time
 - 19.6.4 Seed Rate

19.6.5 Transplanting

	19.7	Interculture and Weed Control					
	19.8	Manures and Fertilizers					
	19.9	Irrigation					
	19.10	Harvesting					
	19.11	Drying of Chillies					
	19.12	Seed Production					
	19.13	Genetic Improvement					
	19.14	Introduction and Selection					
	19.15	Hybridization					
	19.16	Hybrid Breeding					
	19.17	Breeding for Disease and Insect-Pest Resistance					
		19.17.1 Mutation Breeding					
	(ii) PAP	PRIKA (C. annum)					
	19.18	Importance					
	19.19	What is a good Paprika?					
	19.20	Major Types of Paprika					
	19.21	Area/Production in H.P. Hills in India and World					
	19.22	Nature of the Crop and its Uses Including Medicinal Properties					
	19.23	Production Technology					
	19.24	Planting Season					
	19.25	Seed Production					
	19.26	Other Information					
	19.27	Composition					
	19.28	Uses					
(C. f	(iii) Bird Chillies and Tabasco Chillies (C. frutescens Linn.)						

20. Caraway

- 20.1 Description and Distribution
- 20.2 Composition
 - 20.2.1 Adulteration
 - 20.2.2 Volatile Oil
- 20.3 Uses

21. Cardamom

- 21.1 Cardamom (Aframomum Species)
 - 21.1.1 Madagascar and Cameroon Cardamoms
 - 21.1.2 Korarima
 - 21.1.3 Grains of Paradise or Guinea Grains
- 21.2 Composition
- 21.3 Uses

22. Greater Cardamom

- (i) Bengal Cardamom
- 22.1 Description and Distribution
- 22.2 Uses
- (ii) Round Cardamom
- 22.3 Description and Distribution
- 22.4 Uses
- (iiI) Cambodian Cardamom
- (iv) Greater Indian Cardamom (Large Cardamom) or Nepal

Cardamom

- 22.5 Description and Distribution
- 22.6 Production Technology
- 22.7 Breeding
- 22.8 Seed Production

				22.8.1	Post-Harvest Management
		22.9	Com	oosition	
				22.9.1	Volatile Oil
		22.10	Uses		
23.	Less	er Card	lamor	n or Tru	ie Cardamom
		23.1	Desc	ription a	nd Distribution
				23.1.1	Harvesting and Drying/Curing
				23.1.2	Drying in a Heated Chamber—Kiln Drying
				23.1.3	Bleaching of Cardamom
				23.1.4	Varieties/Types of Cardamoms
		23.2	Com	oosition	
		23.3	Uses		
24.	Cele	ry Seed	i		
		24.1	Desc	ription a	nd Distribution
				24.1.1	Plant Characters
				24.1.2	Varieties
		24.2	Crop	Producti	on
				24.2.1	Climate and Soil
				24.2.2	Nursery Management
				24.2.3	Manures and Fertilizers
				24.2.4	Irrigation
				24.2.5	Inter-Culture
				24.2.6	Harvesting
				24.2.7	Post-Harvest Handling
		24.3	Disea	ases and	Insect-Pests
				24.3.1	Diseases

24.3.2 Insect-Pests

24.3.3 Seed Production

	24.4	Breeding	
	24.5	Composition	
		24.5.1	Volatile Oil
		24.5.2	Celery Chaff Oil
		24.5.3	Oleoresin of Celery Seed
		24.5.4	Celery Leaf Oil/Herb Oil
	24.6	Uses	
25.	Cinnamon		
	25.1	Description a	nd Distribution
		25.1.1	Preparation and Curing of Bark
	25.2	Composition	
	25.3	Uses	
26.	Clove		
	26.1	Description a	nd Distribution
		26.1.1	Preparation of Cloves
		26.1.2	Extraneous Matter
	26.2	Composition	
		26.2.1	Clove Bud Oil
		26.2.2	Clove Stem Oil
		26.2.3	Clove Leaf Oil
	26.3	Adulteration	
	26.4	Uses	
27.	Coriander		
	27.1	Description a	nd Distribution
		27.1.1	Nature of Plant
	27.2	Varieties	
		27.2.1	According to Colour

27.2.2 According to Seed Type

- 27.2.3 Improved Varieties
- 27.2.4 Other Varieties
- 27.3 Climate
- 27.4 Production Technology
 - 27.4.1 Soil
 - 27.4.2 Sowing Time
 - 27.4.3 Seed Rate and Method of Sowing
 - 27.4.4 Manure and Fertilizers
 - 27.4.5 Irrigation
 - 27.4.6 Interculture
 - 27.4.7 Harvesting
 - 27.4.8 Yield
 - 27.4.9 Insect-Pests and Diseases
- 27.5 Composition
 - 27.5.1 Volatile Oil
 - 27.5.2 Fatty Oil
 - 27.5.3 Coriander Herb Oil
- 27.6 Adulteration
- 27.7 Uses

28. Cumin Seed

- 28.1 Description and Distribution
- 28.2 Composition
 - 28.2.1 Volatile Oil
 - 28.2.2 Adulteration of Volatile Oil
 - 28.2.3 Fixed Oil
- 28.3 Uses

29. Curry Leaf

29.1 Description and Distribution

	29.2	Composition	
		29.2.1	Volatile Oil
	29.3	Uses	
30.	Fenugreek		
	30.1	Importance	
	30.2	Description a	nd Distribution
	30.3	Uses	
		30.3.1	Nature of Plant
	30.4	Varieties	
		30.4.1	Non-Scented or Deshi
		30.4.2	Scented
		30.4.3	Improved Varieties
		30.4.4	Pusa Early Bunching
		30.4.5	Kasuri Selection
		30.4.6	Other Varieties
	30.5	Production Te	echnology
		30.5.1	Soil
		30.5.2	Climate
		30.5.3	Manure and Fertilizers
		30.5.4	Sowing
		30.5.5	Irrigation
		30.5.6	Interculture
		30.5.7	Crop Improvement
		30.5.8	Harvesting
	30.6	Yield	
		30.6.1	Common Methi
		30.6.2	Kasuri Methi
		30.6.3	Seed Production

30.6.4 Isolation 30.6.5 Inspection 30.6.6 Harvesting and Threshing 30.6.7 Diseases 30.7 Fixed Oil 30.7.1 Volatile Oil 30.8 Effect of Roasting and Cooking on Nutritive Value 30.9 Uses 31. Garlic 31.1 Two Garlic Crops a year 31.2 Varieties 31.3 Breeding 31.4 Seed Production 31.4.1 Field Standards 31.4.2 Seed Standards 31.5 Garlic Powder 31.6 Uses 32. Ginger 32.1 **Description and Distribution** 32.2 Breeding 32.3 **Production Technology** 32.4 Post-Harvest Management 32.5 Seed Production Technology 32.6 Post-Harvest Handling of Seed Crop 32.7 Composition 32.7.1 Volatile Oil 32.7.2 Ginger Oleoresin

- 32.8 Uses
- 32.9 Use of Ginger Oil

33. Nutmeg

- 33.1 Description and Distribution
- 33.2 Composition
 - 33.2.1 Quality Grades
 - 33.2.2 Nutmeg Butter
 - 33.2.3 Leaves
 - 33.2.4 Bark
 - 33.2.5 Fruit Rind
- 33.3 Adulteration
- 33.4 Uses

34. Onion

- 34.1 Description and Distribution
- 34.2 Breeding
- 34.3 Post-Harvest Handling
- 34.4 Quality Traits of Onion for Dehydrated
- 34.5 Dehydrated Onion Products
 - 34.5.1 Onion Powder
 - 34.5.2 Onion Salt
- 34.6 Composition
 - 34.6.1 Composition of Onion Powder
- 34.7 Uses

35. Pepper Long

- 35.1 Description and Distribution
- 35.2 Composition
- 35.3 Uses

36. Sage

J 0.	Juge				
		36.1	Descr	ription ar	nd Distribution
		36.2	Comp	osition	
				36.2.1	Volatile Oil
		36.3	Uses		
37.	Spea	rmint			
		37.1	Descr	ription ar	nd Distribution
		37.2	Comp	osition	
				37.2.1	Volatile Oil
		37.3	Uses		
38.	Thym	ie			
		38.1	Descr	ription ar	nd Distribution
		38.2	Comp	osition	
				38.2.1	Volatile Oil
		38.3	Uses		
39.	Turm	eric			
		39.1	Descr	ription ar	nd Distribution
		39.2	World	l Trade o	f Turmeric
		39.3	Produ	ıction Te	chnology
				39.3.1	Climate
				39.3.2	Soil
				39.3.3	Planting Material
				39.3.4	Varieties
				39.3.5	Land Preparation

39.3.6 Time and Method of Planting

Mulching

39.3.7

39.3.8

Application of Manures and Fertilizers

```
39.3.10 Irrigation
                       39.3.11 Crop Rotation and Inter-Cropping
                       39.3.12 Harvesting and Yield
                       39.3.13 Curing
                       39.3.14 Colouring Turmeric
                       39.3.15 Storage of Rhizomes
          39.4 Insect-Pest and Diseases
                       39.4.1 Insects
          39.5
                 Diseases
                       39.5.1 Leaf Spot
                       39.5.2 Leaf-Blotch
                       39.5.3 Control Measures
                       39.5.4 Rhizome-Rot
          39.6
                 Breeding
          39.7
                 Commercial Quality of Turmeric
          39.8
                 Per-Capita Consumption
          39.9
                 Composition
                       39.9.1 Volatile Oil
                       39.9.2 Oleoresin
          39.10 Uses
40. Vanilla
          40.1
                 Description and Distribution
                       40.1.1 Harvesting and Curing
                       40.1.2 Quality Attributes of Vanilla
          40.2
                 Composition
```

40.2.1 Adulteration/Substitution

40.2.2 Vanilla Extracts/Essences

39.3.9 Interculture

40.3 Uses

40.3.1 As Food Flavourant & in Perfumery

41. Plant Layouts

42. Photographs of Plant and Machinery with Supplier's Contact Details

- Destoner Machine
- Spice Pulverizer Machine
- Sieves
- Horizontal Centrifugal Sieve
- Heat Sealing Machine
- Compressor
- Roaster
- Heat Sealing Machine
- Spice Roaster
- Rotary Roaster
- Hammer Mill
- Spices Distillation Equipments

About NIIR Project Consultancy Services (NPCS)

NIIR Project Consultancy Services (NPCS) is a reliable name in the industrial world for offering integrated technical consultancy services. Its various services are: Prefeasibility study, New Project Identification, Project Feasibility and Market Study, Identification of Profitable Industrial Project Opportunities, Preparation of Project Profiles and Pre-Investment and Pre-Feasibility Studies, Market Surveys and Studies, Preparation of Techno-Economic Feasibility Reports, Identification and Selection of Plant and Machinery, Manufacturing Process and/or Equipment required, General Guidance, Technical and Commercial Counseling for setting up new industrial projects and industry. NPCS also publishes various technology books, directories, databases, detailed project reports, market survey reports on various industries and profit making business. Besides being used by manufacturers, industrialists, and entrepreneurs, our publications are also used by Indian and overseas professionals including project engineers, information services bureaus, consultants and consultancy firms as one of

the inputs in their research.

NIIR PROJECT CONSULTANCY SERVICES 106-E, Kamla Nagar, New Delhi-110007, India. Tel: 91-11-23843955, 23845654, 23845886, +918800733955 Mobile: +91-9811043595

Email: npcs.ei@gmail.com, info@entrepreneurindia.co Website: www.entrepreneurIndia.co