

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

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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.

1. INTRODUCTION

Varieties of Tomato

Other Tomato Varieties

Major Tomato Growing Belts in India

Botanical Description of Tomato Plant

Uses of Tomatoes

Health Benefits

Home Remedy of *Solanum Lycopersicum* (Tomato)

Medicinal Uses of Tomato (*Solanum Lycopersicum*)

Benefits of Tomato

Lower Cholesterol

Reduce Heart Disease

Lower Blood Pressure

Regulates Blood Sugar

Counteract Acidosis

Reduce Migraines

Boost Immunity

Natural Sunscreen

Strengthen Bones

Treatment of Vasodilation

Lead Toxicity

Eye Disorder

Combating Stroke

Mood

Wound Repair

Diabetes

2. BASIS FOR SUCCESSFUL CULTIVATION OF TOMATO

Climate and Soil

Temperature and Light

Climate Zones for Tomato Varieties

Zone A

Zone B

Zone C

Soil

Water and Humidity

Choice of Varieties

Growing Preparation

Site Selection

Land Preparation

Purchasing Tomato Seedlings

Seedlings

Nursery Management

Crop Spacing and Arrangement

Transplanting

3. CROP HUSBANDRY

Bulky Organic Manures

Farmyard Manure
Sheep and Goat Manure
Poultry Manure
Concentrated Organic Manures
Oil Cakes
Major Sources of Manures
Advantages of Organic Manures
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Nitrogen
Phosphorus
Potassium
Calcium
Minor Elements
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2. Sprinkler Irrigation
3. Drip Irrigation
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Pruning to Shape
Nipping
Heading
Trimming Leaves
Weed Control
Crop Rotation
Protected Cultivation
Greenhouses
Climate Control
Water Supply and Crop Husbandry
Types and Constructions
Financial Turnover
Organic Farming
Soil Fertility
Crop Rotation
Sanitation Practices

4. TOMATO PRUNING

Pruning Unstaked Plants
Pruning Tops of Plants
Pruning Roots
Identify Tomato Suckers
Support Systems
Staking and Spacing Options: Cages, Fences, or Stakes
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Types of Training Systems
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Earliness and Harvest Period
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5. DEHYDRATION/DRYING OF TOMATOES

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Drying Methods

1. Sun Drying
2. Oven Drying
3. Dehydrator Drying

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Health Benefits of Sun Dried Tomatoes

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6. CANNING OF TOMATOES

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Preparing Tomatoes

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Closing the Jars

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Step-By-Step Canning

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Step-By-Step Canning

Pressure Canner Method

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Storing

Before Using

7. PRESERVING BY HEATING

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Disadvantages

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Glass

Types of Heating

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Sterilization in a Bath of Boiling Water

Sterilization with a Pressure Cooker or Autoclave

Tins

Glass Jars

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Washing and Trimming

Crushing

Pulping

Hot Process

Process Flow Diagram

9. TOMATO PASTE

Introduction

Raw Material Requirements

Manufacturing Process of Tomato Paste

Process Flow Diagram

10. TOMATO KETCHUP

Introduction

Uses of Tomato Ketchup

Ingredients Required

Process Description

Process Flow Diagram

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Introduction

Manufacturing Process of Tomato Juice

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Crushing

Hot Pulping

Extraction of Juice

Deaeration

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3. Describe the Intended Use and Consumers of the Food

4. Develop a Flow Diagram which Describes the Process

5. Verify the Flow Diagram

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2. Determine Critical Control Points (CCPs)

3. Establish Critical Limits

4. Establish Monitoring Procedures

5. Establish Corrective Actions

6. Establish Verification Procedures

7. Establish Record-keeping and Documentation Procedures

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Promotional

Regulatory

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Requirement For FPO Application Proceedings

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AGMARK Products are Manufactured After

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Agmark Registration is available for following Products

Requirement of Agmark Application Proceedings

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Forms of Flexible Packaging

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Use of Plastics in Food Packaging

Types of Plastics Used in Food Packaging

Types of Plastic Used in Packaging

Polyethylene

Polypropylene (PP)

Polyethylene Terephthalate (PET or PETE)

Polyethylene Naphthalene Dicarboxylate (PEN)

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