Herbs Cultivation & Their Utilization

Author: NIIR Board Format: Paperback ISBN: 8178330644

Code: NI55 Pages: 522

Price: Rs. 800.00 US\$ 21.62

Publisher: Asia Pacific Business Press Inc.

Usually ships within 5 days

India is one of the leading Herbs producer and exporter in the world. Several meticulous researches were conducted and experimented with herbs. They arrived at more precise conclusions about the usefulness of diverse plants and herbs that are utilized in different fields like medicine, cosmetics, perfumes and so on. The Ayurveda healing is completely based on herbs, which have definite medicinal importance or significance. In the primeval times, the Indian sagacious held the view that ayurveda herbs are the only resolution to treat numeral health related problems and diseases. Herbal products are replacing the synthetics products because of its harsh nature. Herbal products are in huge demand in the developed world for health care for the reason that they are efficient, safe and have lesser side effects. Growing herbs is easy to do, and people continue to turn their love for gardening into successful businesses growing and selling fresh cut herbs, herb plants, and other herb related products.

The book makes an attempt to provide information on cultivation and utilization of herbs. The book also contains the described process of the cultivation of medicinal herbs, spices etc with photograph and diagrams. This book also describes about the role of perfumery, analysis of essential oils and flavors, recent development of some natural products and more.

This book covers the comprehensive information on herbs cultivation & their utilization. We hope that this book will be very helpful for new Entrepreneurs, Herb Growers, professionals & research Institutions.

Contents

1. MEDICINAL PLANTS-PRIORITIES IN INDIAN MEDICINES

Medicinal Plants Based Drug Industry

Medicinal Plants Based Drug Industries in Indian systems of Medicine

Plant Parts Extract and Galenicals

Essential Oils from Plants

Phytopharmaceuticals

India's Strength in Medicinal Plant Wealth

Priorities in Research on Medicinal Plants & Diverse Studies

Antiprotozoal Drugs from Plants

Antiulcer Drugs from Plants

Antirheumatic Plant

Antidiabetic Plants

Antiasthmatic Plants

Antiviral Plants

Hepatoprotective Plants

Fertility Control by Plants

Anti-Cancer Drugs from Plants

Plant for Urinary Stones

Plants as sedatives/tranquillizers

Plant Laxatives

Pitfalls in Plant-Drug Research and Implications

Herbal Drug/Intellectual Property Rights (IPR)

Herbal Drug Trade

Herbal Medicines-Medicinal Marvel or Money Spring Malarkey

Sociopolitical, Economical & Ethical Issues in Medicinal Plants Research

Herbal Drug Development

Standardization of Herbal Drugs

2. MEDICINAL PLANTS IN ORAL HEALTH CARE IN INDIA

INTRODUCTION

Use of Medicinal Plants for Dental Care

Plants Useful as Chewing Stick

3. CHAMOMILE CULTIVATION

INTRODUCTION

Description of the Plant

Genetics

CULTIVATION

Soil and Climate

Propagation/Nursery

Transplantation, Irrigation and Weeding

Cropping Sequence

Pests and Diseases

Manures and Fertilizers

Harvesting

Collection of Seeds

Yield

Drying and Storage

Distilation

Yield and Characteristics of the Oil

Uses

Specification of the Drug

4. KALMEGH, ANDROGRAPHIS PANICULATA CULTIVATION

INTRODUCTION

Description of the Plant

Genetic Improvement

CULTIVATION

Climate

Soil

Propagation

Transplanting

Manure and Fertilizer

Irrigation

Interculture

Harvesting

Diseases and Pests

Hemical Constituents

Uses

5. CORIANDER CULTIVATION

INTRODUCTION

Description of the Plant

CULTIVATION

Soil and Climate

Propagation

Irrigation

Harvesting

Pests and Diseases

Distillation

Yield

Chemical Constituents

Uses

6. BHUMYAMALAKI PHYLLANTHUS AMARUS CULTIVATION

INTRODUCTION

Description of the Plant

CULTIVATION

Soil and Climate

Propagation

Transplanting

Weed Control

Fertilizers and Manures

Irrigation

Harvesting

Cultivar

Chemestry

Extraction

Traditional Medicinal Uses

Pharmacology/Clinical Trials

Drug Preparations from P. Amarus Available in Markets

7. QUINGHAOSU ARTAMISLA ANNUA CULTIVATION

Introduction

Description of the Plant

Soil and Climate

Propagation

Weed Control

Fertilizers and Manures

Harvesting

Chemestry and Uses

Distillation

8. ERGOT CULTIVATION

INTRODUCTION

History

The Ergot Fungus

Cultivation

Ergot Alkaloids

Uses

9. BELLADONNA CULTIVATION

INTRODUCTION

Description of the Plant

Distribution

CULTIVATION

Soil and Climate

Raising of Nursery

Fertilizer Application

Irrigation

Interculture

Harvesting and Drying

Disease and Pests

Chemical Constituents

Uses

10. SOUTH AMERICAN MARIGOLD (TAGETES MINUTA)

INTRODUCTION

Botanical Description of the Plant

Genetic Improvement

Agrotechnology

Soil and Climate

Propagation

Weed Control

Fertilizers and Manures

Intercropping

Irrigation

Harvesting

Crop Rotations

Diseases

Uses

Distillation

Chemistry

Distillation Unit Design Available

11. EUCALYPTUS CITRIODORA CULTIVATION

INTRODUCTION

Description of the Plant

CULTIVATION

Soil and Climate

Preparation of Land

Propagation

Nursery

Transplanting

Weeding

Manures and Fertilizers

Harvesting

Pest and Diseases

Distillation

Yield

Chemical Constituents

Use

12. ROSEMARY CULTIVATION

Introduction

Description of the Plant

CULTIVATION

Soil and Climate

Propagation

Transplanting, Interculture and Fertilizer Application 105

Irrigation

Harvesting

Pests and Diseases and their control

Distillation

Oil content and Yield

Chemical Constituents

Uses

13. DUBOISIA CULTIVATION

INTRODUCTION

Botany

Soil and Climate

Cultivation

Preparation of Land

Raising the Nursery

Transplanting

Irrigation

Fertilizers Application

Pests and Diseases

Harvesting

Yield

Active Constituents and Uses

14. MANDOOKPARNI-GUTUKOLA CENTELLA ASIATICA

CULTIVATION

INTRODUCTION

Botanical Description

CULTIVATION

Land Preparation

Varieties

Planting

Fertilizer

Irrigation

Weed Control

Harvesting

Post Harvest Processing

Yield

Chemistry

Uses

15. SAPOGENIN BEARING SPECIES OF YAMS AND THEIR

CULTIVATION

INTRODUCTION

Botany

Soil and Climate

Propagation

Propagation by Seeds

Propagation by stem cutting

Propagation from tuber pieces

Field Preparation and Planting

Provision of Support

Interculture

Fertiliser Application

Irrigation

Pests and Diseases

Harvesting

Chemistry & Uses

16. PERIWINKLE CULTIVATION

INTRODUCTION

Description of the Plant

Soil and Climate

Propagation

Manure and Fertilizers

Weeding

Irrigation

Harvesting

Yield

Pests and Diseases

Active Constituents and Uses

17. SENNA (CASSIA ANGUSTIFOLIA) CULTIVATION

INTRODUCTION

Description of the Plant

Improved Varities

Soil

Climate

Land Preparation

Sowing

Manuring and Fertilization

Irrigation

Weeding and Interculture Operations

Harvesting

Yield

Pest and Diseases

Active Constituent and Uses

Extraction of Sennosides

18. Cultivation of Lentinus Edodes-An Important Medicinal

Mushroom

Cultivation

Materials and Substrates

Diseases, Pests and Control

19. CULTIVATION OF KAEMPFERIA GALANGA L.

INTRODUCTION

Botany

Crop Improvement

Crop Management

Extraction of Essential Oil

Physico-Chemical Properties of Oil

Utilisation

20. CULTIVATION OF SWEET MARJORAM

INTRODUCTION

Floristics and Crop Improvement

Floristics

Ex. Dittany

Studies on Floral Biology

Flowering Anthesis and Pollen Studies

Crop Improvement

Evaluation of Germplasm

Crop Production and Management

Soil and Climate

Propagation

Nursery Raising

Vegetatove Propagation

Studies on Nurtient and Spacing

Use of Growth Regulators

Crop Rotation/Sequencing and intercrops

Irrigation and Interculture

Insect Pests and Diseases

Harvesting Production of Essential Oil and Yield

Chemestry of Oil

Influence of Harvesting stage on the odour values of essential oil

Production of Essential Oil

Yield

21 CULTIVATION OF MATRICARIA CHAMOMILLA

INTRODUCTION

Uses

Soil and Climate Requirements

Cultivation

Botanical Characters

Propagation

Crop Growth

Irrigation

Manures and Fertilizers

Weed Control

Harvesting

Fresh Flower and Oil Yield

Seed Collection and Storage

Drying Fresh Flowers

Distillation

Effect of Growth Regulators

Diseases and Pests

Chemical Composition

Chamomilla Waste

Ray and Disc Florets

Roots of Matricaria Chamomilla

Analytical Methods

22 CULTIVATION OF SPICES

INTRODUCTION

Black Pepper

Climate

Soil

Vareties

Production of Rooted Cutting

Cultural Practices

Standards

Planting

Under Planting

Soil Fertility and Nutrient Management

Irrigation

Inter-and Mixed-Cropping

Bush Pepper

Diseases

Pests

Harvesting

Cardamom

Varieties

Propagation

Nursery

Mainfield Planting

Diseases Pests Cloves Climate and Soil Varieties Planting Material **Planting** Manuring Diseases Pests Nutmeg **Cultural Practices** Manuring Diseases Pests Clinnamon **Cultural Practices** Manuring and Processing Diseases Pests Ginger Varities **Cultural Practices** Diseases Pests Turmeric Varities **Cultural Practices** Diseases Pests 23 PLANTAGO OVATA FORSK, CULTIVATION Cultivation Plant Morphology **Chromosome Complement Breeding System** Diseases Processing Chemical Constituents and Characteristics of the Seed Utility **Toxicity** Improvement Wild Allies 24 PYRETHRUM CULTIVATION INTRODUCTION Description of the Plant **CULTIVATION** Soil and Climate

Preparation of Field Raising of Nursery Fertilizer Application

Interculture

Irrigarion

Harvesting and Drying

Yield

Uses

25 FRENCH BASIL CULTIVATION

INTRODUCTION

European Type

Reunion Type

Methyl Cinnamate Type

Eugenol Type

Botany

Soil and Climate

Field Preparation

Propagation

Raising of Nursery

Planting

Irrigation

Fertilizer Application

Interculture

Harvesting and Yield

Distillation

Diseases and Pests

Active Constituents and Uses

26 PALMAROLSA CULTIVATION

INTRODUCTION

Botany

Soil and Climatic Conditions

Propagation

Transplantation of Seedingd

By Slips

Irrigation

Weeding

Fertilizers

Harvesting

Distillation

Oil Content and Yield

Chemical Constitutents and Uses

27 JAVA CITRONELLA CULTIVATION

INTRODUCTION

Botany

Soil and Climate

Preparation of Land

Propagation

Fertiliser Application

Interculture

Irrigation

Harvesting

Distillation

Oil Content and Oil Yield

Diseases and Pests

Chemical Constituents and Uses

29 PATCHOULI CULTIVATION

INTRODUCTION

Botany

Soil and Climate

Cultivation

Preparation

Raising the Nursery

Transplanting

Irrigation

Fertiliser Application

Interculture

Pests and Diseases

Root-Knot

Leaf Blight

Harvesting

Drying

Distillation

Oil Content and Oil Yield

Storage

Chemical Constituents

Uses

29 CULTIVATION OF DAVANA

INTRODUCTION

Description

Description of the Plant

Soil and Climate

Nursery

Transplanting, Irrigation and Weeding

Manures and Fertilizers

Harvesting

Pests and Diseases

Distillation 281

Oil Content and Yield

Chemical Constituents and Uses

30 CULTIVATION AND UTILIZATION OF AMMI MAJUS

Description fo the Plant

Harvesting

Yield

Pests and Diseases

Extraction of Xanthotoxin

Essential Oil

Uses

31 ROSE CULTIVATION

INTRODUCTION

Description

CULTIVATION

Climate

Soil

Propagation

Transplanting

Subtropical Region

Temperate Region

Fertilizer Application

Subtropical Region

Temperate Region

Irrigation

Pruning

Interculture

Harvesting

Diseases and Pests

Distillation

Chemistry of the Oil

Uses

32 CULTIVATION OF GERANIUM

INTRODUCTION

Description of the Plant

Soil and Climate

Propagation

Transplanting, Irrigation and Weeding

Manures and Fertilizers

Intercropping

Harvesting

Pests and Diseases

Distillation

Oil Content and Yield

Chemical Constituents and Uses

33 CULTIVATION OF MUSKDANA

Description of the Plant

Cytology

Climate

Soil

Seed Sowing

Fertilizers

Irrigation

Weeding

Harvesting

Pests and Diseases

Leaf Hooper (Amrasca biguttula)

Leaf Roller (Sylepta derogata Feb.)

Spotted Ball Worm (Erias fobia Stoll/Erias vittella (F)

Thrips

Uses

Distillation & Separation of Aromatic Principales

Properties of Essential Oil

34 CULTIVATION OF POGOSTEMON

PATCHOULI FOR ITS OIL

Botany

Soil and Climate

CULTIVATION

Preparation of Land

Propagation and Transplanting

Irrigation

Fertilizers Application

Harvesting

Drying

Distillation

Oil Yield

Physicochemical Properties of the Oil

Physiological Studies

Diseases and Pests

Uses

Adulterants

35 CULTIVATION OF PODOPHYLLUM HEXANDRUM

INTRODUCTION

Distribution and Habitat

Parts Used

Therapeutic Uses

Botanicial Description

Seed Germination and Development of Seedlings

Germination is Epigaeous

Cultivation

Recommended Cultural Practices

Climate

Soil

Propagation

Manures and Fertilizers

Irrigation

Interculture

Harvesting and Processing

Expected Yield

Chemical Constituents and Demand in the World Market 332

Future Strategies

36 CULTIVATION OF HYOSCYAMUS

Distribution

Botany

Cytology and Genetics

Soil and Climate

Cultivation

Propagation

Transplanting

Irrigation

Fertilizer Application

Harvesting, Drying and Storage

Physiological Studies

Tissuecultures Studies

Constituents

Diseases and Pests

Uses

Adulterants

37 CULTIVATION LIQUORICE (GLYCYRRHIZA GLABRA L.)

Soil and Climate Requirements

Preparation of Land

Propagation

Harvesting

Regenearation

Interplantation

Yield

In Vitro Multiplication

Diseases and Pests

Flowering and Seed Setting

Cytogenetical Studies

Quality and Specification

Substitutes

Important Chemical Constituents of Liquorice Processing 38 CULTIVATION OF BRAHMI BACOPA MONNIERI INTRODUCTION Plant Description **CULTIVATION** Soil and Climate **Land Preparation** Varieties **Transplanting** Fertilizer Irrigation Weed Control Pest Harvesting Post Harvest Technology Yield Chemistry Uses 39 LAVENDER CULTIVATION INTRODUCTION Botany Soil and Climate Propagation Propagation by Seeds Propagation Through Vegetative Means Transplantation Fertilizers Application Weeding Regeneration Harvesting Distillation Oil Content and Oil Yield Chemical Constituents Uses 40 ASHWAGANDHA (WITHANIA SOMNIFERA) **CULTIVATION** INTRODUCTION Description of the Plant Cultivars **CULTIVATION** Soil and Climate

Land Preparation

Seed Rate and Sowing

Thinning and weeding

Irrigation

Crop Protection

Harvesting

Post Harvest Technology

Yield

Chemistry

Uses

41 LEMONGRASS CULTIVATION

Method of Lemongrass Cultivation

Preparation of Land

Need of Manure

Seeds for Sowing Lemongrass or Planting Material

Time of Sowing

Method of Sowing

Need of Irrigation

Need of Roeing and Weeding

Reaping of Crop

Oil Extraction from Leaves

Various Species/Kinds of Lemongrass

Profits from Lemongrass Cultivation

Where to Contact for Selling of Lemongrass Oil

42 Menthol Mint Cultivation

Present Situation

Various Species of Menthol Mint:

Preparation of Field for sowing Mentha

Method of Sowing Mentha

Irrigation

Manure and Fertilizer

Control

Method of Cropping

Cutting of Crops

Main Insects Causing Damage to Mentha Crop

Production of Oil from Mentha Leaves

Future of Mentha Oil

Present Market Situation of Mentha Industry

and its future Possibilities

The Supplirs of Mentha Seeds

Machinery/Equipment for mentha

43 PRODUCTION OF OIL FROM CITRONELLA GRASS

Agriculture Technique for Cultivation of Citronella

Preparation of Land

Planting Material/Seeds for Citronella Cultivation

Method of Sowing

Main Species of Citronella

Need of Water for Citronella Crop

Main Diseases & Insects in Citronella Crop

Reaping of Crops

Distillation of Leaves

Profit Obtained from Citronella Crop

Obtainging Planting Material

Palmrose or Rosegrass

44 A ROLE OF PERFUMER IN INDUSTRY

45 ADVANCES IN THE ANALYSIS OF ESSENTIAL OILS

AND FLAVOURS

Gas Liquid Chromatography

Capillary and Chiral Gas Chromatography

Preparative Gas Chromatography

Column Chromatography

Thin Layer Chromatography

Supercritical Fluid Extraction (SFE)/Fractionation

/SFF)/Chromatography (SFC)

Techniques Ancillary to Gas Chromatography

Identification Techniques

Retention Indices

Mass Spectrometry

Multidimensional GC-MS

HRGC-FTIR

High Pressure Liquid Chromatography

Chemical Transformation

Techniques Ancillary to Liquid Chromatography

Ultra Violet and Infra Red Spectroscopy

Nuclear Magnetic Resonance

Detection of Synthetics in Natural Oils by Isotopes Analysis

Isotope Analysis by MS

Isotope Analysis by NMR

Intelligent Sensor Technology

46 UTILIZATION OF LIGNO-CELLULOSIC

WASTE OF ESSENTIAL OIL INDUSTRY

Cymbopogon Marc

Mentha Marc

Utilisation of Woody Stems of Eucalyptus Citriodora

47 RECENT DEVELOPMENTS OF SOME

NATURAL PRODUCTS

Monoterpene Iridoids

Valtrats

Saponins

Sataver

Centella Asiatica

Horse Chestnut

Sterols

Sitosterol (Beta-Sitosterols)

Guggul

Cardenolides

Asclepias Curassavica

Pueraria Tuberosa

ALDALOIDS FLAVONOIDS

Aristolochia Indica

Silybum Marianum

Gingko Biliba

Adhatoda Vasica

MISCELLANEOUS

Allium Cepa (Onion)

ADAPTOGENS

Ginseng

Withania Somnifera (Ashwagandha)

Titnospora Cordifolia (Guduchi Giloe)

ANTICANCER DRUGS

Vinca Alkaloids

Podophyllotoxin

Maytansinoids

Ellipticine

Gossypol

Taxol

Camptothecins

Bryostanins Acetogenins ANTI-AIDS AGENTS Castanospermine Hypericin Cornosolic Acid Forskolin Artemisinin (Quinghaosu) **Echinacea Species** 48 PRODUCTION OF SECONDARY METABOLITIES IN PLANT TISSUE CULTURE Biotransformation or Precursor Feeding Immobilization of Plant Cells Elicitation Induction of Hairy Roots Using Agrobacterium Rhizogenes Use of Tools of Molecular Biology Concluding Remarks

About NIIR

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

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

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

Our Detailed Project report aims at providing all the critical data required by any entrepreneur vying to venture into Project. 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.

NIIR PROJECT CONSULTANCY SERVICES, 106-E, Kamla Nagar, New Delhi-110007, India. Email: npcs.india@gmail.com Website: NIIR.org

Sat, 27 Apr 2024 04:51:15 +0530