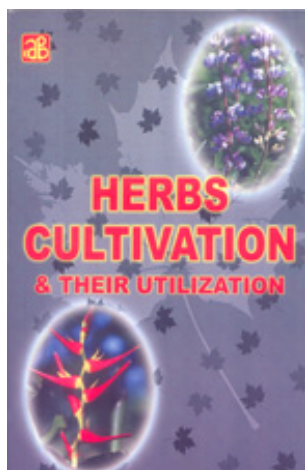


Herbs Cultivation & Their Utilization



Author: NIIR Board

Format: Paperback

ISBN: 8178330644

Code: NI55

Pages: 522

Price: Rs. 800.00 **US\$** 100.00

Publisher: Asia Pacific Business Press Inc.

Usually ships within **3** days

India is one of the leading Herbs producer and exporter in the world. 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

Distillation

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

Chemical 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
Chemistry
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
Chemistry 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 Varieties

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

Vegetative Propagation

Studies on Nutrient 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

Chemistry 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

Varieties

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
Cinnamon
Cultural Practices
Manuring and Processing
Diseases
Pests
Ginger
Varieties
Cultural Practices
Diseases
Pests
Turmeric
Varieties
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
Irrigation
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 Seedlings
By Slips
Irrigation
Weeding
Fertilizers
Harvesting
Distillation
Oil Content and Yield
Chemical Constituents 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

Botanical Description
Seed Germination and Development of Seedlings
Germination is Epigeaeous
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
Regeneartion
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
Carnosolic Acid
Forskolin

Artemisinin (Quinghaosu)
Echinacea Species
48 PRODUCTION OF SECONDARY METABOLITES 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. Its various services are: Pre-feasibility 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, directory, 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 bureau, consultants and consultancy firms as one of the input in their research.

National Institute of Industrial Research , 106-E, Kamla Nagar, New Delhi-110007, India. **Email:** niir@vsnl.com **Website:** NIIR.org

Fri, 21 Nov 2008 22:56:45 -0500