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## Handbook on Citrus Fruits Cultivation and Oil Extraction

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|----------------------------------------------------|----------------------------|
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## Description

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.

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##### Citrus Latifolia Tanaka (Tahiti or Persian Lime)

##### Citrus Limettioides Tanaka (Sweet Lime)

##### Citrus Jambhiri Lush (Rough Lemon; Jambiri)

##### Citrus Limetta Risso (Limetta of the Mediterranean)

##### Citrus Karna Raff (Kharna Khatta)

##### Citrus Limonia Osbeck (Rangpur Lime)

##### Citrus Pennivesiculata Tanaka (Gajanimma)

##### Orange Group

##### Citrus Aurantium Linn (Sour, Bigarade or Senville Orange)

Citrus Sinensis Osbeck (Sweet Orange)  
Citrus Myrtifolia Raffinesque  
Citrus Bergemia Risso (Bargmot Orange)  
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Hamlin  
Jaffa  
Malta Blood Red  
Mosambi  
Pineapple  
Sathgudi  
Shamouti

Valencia Late  
Washington Navel Oranges  
Mandarin Oranges  
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Dancy Tangerine  
Desi Mandarin (Pathankot)  
Khasi Orange  
King Mandarin  
Kinnow Mandarin  
Nagpur Santra  
Satsuma Orange (C. unshiu M.)  
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Lemon C. limon Burm  
Eureka Lemon  
Lisbon Lemon  
Lucknowseedless  
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Malta Lemon  
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Napali Oblong  
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Tahiti (Persian) Lime (C latifolia Tanaka)  
Rangpur Lime (Citrus Limonia Osbeck)  
Sweet Lime (Citrus Limettioides Tanaka)  
Pummelo (C. Grandis Osbeck)  
Nagpur (Chakotra)  
Grapefruit (C. Paradisi Macf)  
Duncan  
Foster  
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Hybrids of Genus Eremocitrus

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Soil

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Blood Red Malta

Sathgudi

Pineapple

Washington Navel

Jaffa

Shamouti

Valencia Late

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Control Measures

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Control Measures

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Control Measures

Control Measures

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Karnataka

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Etiology and Spread

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Papilionidae : Lepidoptera.

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Life History

Damage

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Distribution

Host Plants

Life History

Damage

Control

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Distribution

Host Plants

Life-history

Damage

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Distribution

Host Plants

Life History

Damage

Control

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Distribution

Host Plants

Life History

Damage

Control

Aphids: Hemiptera Aphididae

Distribution

Host Plants

Life History

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Control

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Distribution

Host Plants

Damage

Life History

Control

Scale Insects: (Coccidae: Homoptera)

Damage

Armoured Scales

Unarmoured or Soft Scales

Spread

Control

Mites: (Tetranychidae: Acarina)

Distribution

Life History

Damage

Citrus Rust Mite: Phyllocoptruta Oleivorus Ashm

Six-spotted Mite : Tetranychus Sexmaculatus Riley

Control

Minor Pests

Hairy Caterpillars Euprotctis Fraterna M

The Citrus Leaf-roller (Psorosticha Zizyphi Staintor)

Orange Hair Streak: (Taraucus Theophrastus)

A Grass Hopper : Poekilocerus Pictus Fab

Cricket: Braehytrypes Portentosus Light

Longhorn Bettle: Oberea Mangalorensis

Flower Pests

Citrus Flower Moth : Prays Citri Milliers

Cacoecia Epicyrta Meyrick

Blossom Midge Sayneura Citri G & P

Fruit Pests

Fruit Sucking Moths (Noctuididae : Lepidoptera)

Calpe Emarginata

Distribution

Host Plants

Life History

Damage

Control

Fruit Flies

Distribution

Host Plants

Life History

Damage

Control

Fruit Sucking Bugs

Distribution and Host Plants

Life History

Damage

Control

Citrus Rind Borer: *Prays Endocarpi* Meyrick.

General Control Measures

### 39. Nematodes of Citrus

Citrus Root Nematode

*Tylenchulus Semipenetrans* Cobb. 1913

Host Range

Control Measures

Cultural Control

Biological Control

Resistant Rootstocks

Reniform Nematode (*Rotylenchulus Reimformis*)

Burrowing Nematode (*Radopholus Similies*)

The Lesion Nematode (*Pratylenchus Coffeae*)

Root-knot Nematode (*Meloidogyne Africana*)

The Lance Nematode (*Hoplolaimus Indicus*)

Poncirus

Fortunella (Kumquats)

Citrus

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