

# Handbook on Citrus Fruits Cultivation and Oil Extraction

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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 (Aurantiaceae). 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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Host Plants

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Distribution

Host Plants

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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 Beetle: 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 Africanae)

The Lance Nematode (Hoplolaimus Indicus)  
Poncirus  
Fortunella (Kumquats)  
Citrus

## 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 various 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.

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