

The Complete Book on Jute & Coir Products (with Cultivation & Processing)

Author: NPCS Board of Consultants & Engineers

Format: Paperback

ISBN: 9789381039625

Code: NI287

Pages: 328

Price: Rs. 1,175.00 US\$ 125.00

Publisher: NIIR PROJECT CONSULTANCY SERVICES

Usually ships within 5 days

Jute & Coir are one of the important fibre crops in India. India is the largest producer of Jute & Coir, contributing more than 60% of the total world production. Besides being the cheapest and the most important material of all textile fibers, Jute & Coir products are bio-degradable eco-friendly with numerous environmental advantages. The Demand of Jute and Coir Products are increasing rapidly because of their environment friendly nature.

Jute is one of the most affordable natural fibers and is second only to cotton in amount produced and variety of uses of vegetable fibers. Jute fibers are composed primarily of the plant materials cellulose and lignin. Jute is the name of the plant or fiber that is used to make burlap, hessian or gunny cloth.

Coir is a versatile natural fibre extracted from mesocarp tissue, or husk of the coconut fruit. Generally fibre is of golden color when cleaned after removing from coconut husk; and hence named as "The Golden Fibre".

This Book aims at providing a thorough understanding and analysis of the Jute & Coir sector. The book discusses the overview of the Jute & Coir along with their Classification, Structure, Properties and Manufacturing Process of different products.

Few major contents of the Book are Jute Cultivation, Coconut Cultivation, Jute Yarn, Sutli & Hessian Cloth, Jute Twine (Jute Rope), Gunny Bags, Jute Garments, Jute Shopping Bags, Gunny Bags (Jute Bags) Manufacturing, Handmade Paper from Jute, Environment Pollution and Effluent Treatment of Jute, Coir Fibre, Coir Pith, Biomass Charcoal Briquetting from Jute and Coir Waste, Rubberized Coir Mattresses, Coir Pith for Absorption and Recovery of Oil from Contaminated Sites, Application of Coir in Agricultural Textiles, Manufacture of Coir Corrugated Roofing Sheet, Coir Machinery Manufacturers, Importers of Coir Products. It also contains the Product and Machinery photographs, Name of Indian Buying Agents of Coir Products with their contact details.

The purpose of this book is to provide information to new Entrepreneurs, Technocrats, Students and Professionals.

Contents

1. INTRODUCTION

Jute

Classification of Jute Products

1. Conventional Products
2. Speciality Products
3. Non-Traditional Products
4. Diversified Products

Scheme for Modernization of Organised Jute Mills

1. Training of Workers & Supervisors
2. Machinery Development
3. Productivity Improvement & TQM Facilitation
4. Acquisition of Machinery and Plant (Subsidy Component)

Coir

- A. Modernisation of Production Processes
- B. Development of Machinery and Equipments
- C. Product Development and Diversification
- D. Development of Environment Friendly Technologies

2. JUTE CULTIVATION

Raw Jute Scenario

Botanical Description of Jute

Jute Growing Zones

Manures and Fertilizer Application

Varieties

Seed Rate and Sowing

Weed Management

Top Dressing of Fertilizer

Water Management

Harvest

Yield

Sowing Process of Jute

Harvesting Process of Jute

Retting Practices

- a. Retting Practices in India and Bangladesh
- b. Retting Practices in China
- c. Double Immersion/Single-Wash-Retting in China
- d. Retting Practices in Indonesia
- e. Retting Practices in Nepal
- f. Retting Practices in Thailand

Extraction Practices

Single Stem Stripping

Stripping and Washing or Wash-Jerk-Method

Indian Jute Industry at a Glance

Major Producers of Jute

Jute and Mesta in the National Economy

From Jute to Diversified Products

3. COCONUT CULTIVATION

Origin

Climate and Soil

Varieties of Coconut

Tall Varieties

Dwarf Varieties - Suitable for Tender Coconut

Hybrid Varieties

Planting Material

Site Selection

Time of Planting

Spacing and Systems of Planting

Planting
4. JUTE YARN, JUTE SUTLI & HESSIAN CLOTH
Weaving Integrated Unit
Introduction
Uses & Applications
Properties
Manufacturing Process
Twin Cord Making
Twin Cord Softening Section
Manufacturing Process of Hessian Cloth
Process Flow Diagram
Detailed Manufacturing Process of Jute Yarns & Other Jute Processing
Batching
Drawing
Roving
Spinning
Twisting
Reeling
Winding
Dressing and Beaming
Weaving
Looms
Finishing
Machinery Details And Specifications
1. Spinning Machine and Spreader
Details
Specifications
2. High Speed Automatic Electronic Weaving
Rapier Loom
Details
Specifications
3. Bale Opener
Details
Specifications
5. JUTE TWINE (JUTE ROPE), GUNNY BAGS
Properties of Jute
Manufacturing Process Jute Twine Cum Gunny Bag
Basic Raw Materials Required
Basic Plant and Machineries Required
Process
Small Qualities of Jute Goods
Spinning
Twisting
Weaving
Manufacturing Process Flow Diagram
Machinery Details and Specifications
1. Spinning Machine
Details
Specifications
2. Twister Roller

Details

Specifications

6. JUTE GARMENTS

Introduction

Properties of Jute Garments

Uses of Jute Garments

Manufacturing Process of Jute Garments

Here Jute Garments Means

Basic Raw Materials Required

Basic Plant and Machinery Required

Manufacturing Process Flow Diagram

Machinery Details and Specifications

1. Weaving Machine

Details

Specifications

2. Drying Equipment

Details

Specifications

1. Sewing Machine

Quick Details

Specifications

7. JUTE SHOPPING BAGS

Introduction

Properties of Jute Shopping Bags

Uses & Applications

Manufacturing Process

Raw Material Required

Plant and Machinery Required

Process

Process Flow Diagram

Machinery Details and Specification

1. Sewing Machine

Quick Details

Specifications

8. GUNNY BAGS (JUTE BAGS)

MANUFACTURING

Introduction

1. Hessian

2. Sacking

3. Canvas

Product Description

Uses and Applications

Application of Gunny Bags

1. Food Grains

2. Sugar

3. Cement

4. Fertilizers

5. Chemicals

Manufacturing Process

Inspection of Hessian Cloth

Set Making

Marking

Cutting

Stitching
Inspection of the Bags
Packaging
Process Flow-Sheet for the Manufacture of
Gunny Bags

Machinery details and specifications
1. Sewing Machine
Quick Details
Specifications

9. HANDMADE PAPER FROM JUTE

Introduction
Steps of Manufacturing Process
Machinery Details and Specifications
1. Jute Chopper and Cutter
Company details

2. Hydraulic Press Machine
Company details

3. Calendaring Machine
Company details

4. Cutting Machine
Company details

10. ENVIRONMENT POLLUTION AND EFFLUENT TREATMENT OF JUTE

Effluent Treatment Plant Equipment

11. COIR FIBRE

Coir
Coconut
Structure

Coir Fibre
Processing

Brown Fibre
White Fibre

Major Producers
Kerala Fibre

Bio-Softening And Bio-Bleaching/Brightening
of Coir Fibre

Short-Term Objective of the Softening Process
Long-Term Objective of the Softening Process

Biotechnological Process of Softening and
Bleaching/Brightening

Enzymes Used
Preparation of Media

Molasses Broth Medium

Potato Dextrose Broth Medium

Crude Enzyme Preparation

Treatment of Dry Husk

Results

Improvement in Softness of Dry Husk

12. COIR PITH

Introduction

Application of Coir Pith

Special Features of Coir-Pith

Uses of Coir Pith Blocks

Role of Our Coir Pith Blocks
Manufacturing Process of Coir Pith
Raw Materials
Harvesting and Husking
Retting
Defibering
Finishing
Process Flow Diagram
Machinery Details and Specifications
1. Coir Pith Baling Machine
Details
Specifications
Block Specifications
Machine Specifications
Hydraulic Power Unit
2. Coir Pith Machine
Details
Technical Specifications
Features
Contact Details
3. Crusher
Company Details
4. Industrial Screener
Details
Machine Specifications
Company Details
13. BIOMASS CHARCOAL BRIQUETTING FROM
JUTE AND COIR WASTE
Introduction
What is Charcoal?
What can be Briquetted?
What is Biomass Charcoal Briquetting?
Biomass Charcoal Briquette Production
Raw Materials Required
Process in Manufacturing
1. Biomass collection
2. Carbonization Process
Briquettes Drying Stage
Initial Carbonization Stage
Comprehensive Carbonizing Stage
(temperature 300~650C)
3. Briquetting
Steps for Manufacturing
Process Flow diagram
Machinery Details and Specifications
Company Details
14. RUBBERIZED COIR MATTRESSES
Introduction
Types & Structure of Coir Fibre
Uses and Applications
Properties of Coir
Physical Properties of Coir Fibre
Chemical Properties (Composition)

Advantages of Rubberized Coir Mattresses

Manufacturing Process

Embedding of Coir Fibres

Combing

Leveling

1. Dispersion

2. Solution Preparation

Process Flow Diagram

Production Details of the Product

Machinery Details and Specifications

1. Coir Mattresses Machine

Key Features of Machine

Types of Different Width of Production of by
Machine

Space Required

Power Required

Contact Details

15. COIR PITH FOR ABSORPTION AND RECOVERY
OF OIL FROM CONTAMINATED SITES

Introduction

Process

Methodology

Performance Result of the Screw Press

16. APPLICATION OF COIR IN AGRICULTURAL
TEXTILES

Introduction

Properties

Uses of Coir in Agricultural Textiles

Erosion Control Blankets for Controlling Slope

Erosion

Mulch Blankets

Basket Liners

Bio-Rolls

Roof Greening Mats

Grow Sticks

Coco Logs

Grow Media

17. MANUFACTURE OF COIR CORRUGATED
ROOFING SHEET

Introduction

(1) Physical Properties of Coir Fibre

(2) Chemical Properties (Components of Coir
Fibre)

Materials and Methods for the Manufacture of
Coir Corrugated Sheets

1. Coconut Coir Non-Woven Felt

2. Woven Bamboo Mat

3. Resin

Raw Materials for Resin Manufacture

Novolacs

Applications

Test Methods to Assess the Quality of Cardanol

4. BOPP Film as Releasing Agent

5. Preservative Chemicals
Batch Resin Reactor or Resin Kettle
1. Preparation of Phenol Formaldehyde Resin
Flow Chart for Preparation of PF Resin
2. Preparation of Phenol Cardanol
Formaldehyde Resin
Flow Chart for Preparation of PCF Resin
Phenol-Methanol Polymerization of Resin
Consolidation of Non-Woven Coir Felt
Construction of coir and bamboo mat for
Corrugated Sheet
Machinery/Equipment
Significant Aspect in Manufacture of Coir Felt
Corrugated Sheet
Moisture Content of Coir Felt and Mats
PCF Resin Adhesive Formulation [for bonding]
Requirement of PCF Resin
Impact of Resin Quality
Glue Application on the Coir Felt and Bamboo
Mat
Balance and Drying of Resin Coated Mats
Assembly of Coir Felts/Mats
Hot Pressing
Dimensioning and Finishing of Coir Corrugated
Sheets
Test Performed on Coir Felt Corrugated Sheets
List of Machinery and Equipment
List of Raw Materials
Suppliers and Manufacturers of Plant
Machinery
1. Automatic Corrugated Roofing Sheet
Machine
Quick Details
Specifications
Company Details
2. FRP Roofing Sheets Making Machine
Quick Details
Specifications
Technology Parameter
Company Details
18. INDIAN BUYING AGENTS OF COIR
PRODUCTS
Ahmedabad
Aligarh
Bangalore
Bhadohi
Chennai
Dehradun
Delhi
Jaipur
Jalandhar
Kolkata
Mirzapur

Mumbai

Noida

Panipat

Pune

Tadong

Tirupur

Tuticorin

19. COIR MACHINERY MANUFACTURERS

20. IMPORTERS OF COIR PRODUCTS

Australia

Bangladesh

Brazil

Canada

China

France

Germany

Italy

Japan

Malaysia

Pakistan

South Africa

Spain

Thailand

United Kingdom

USA

21. PHOTOGRAPHS

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.

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

