

Plantation and Agroforestry

– Pulpwood Value Chain Approach

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Published by
SCIENTIFIC PUBLISHERS (INDIA)

5 A, New Pali Road
P.O. Box 91
Jodhpur - 342 001 INDIA

■ 4806/24, Ansari Road
Daryaganj
New Delhi - 110 002 INDIA

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ISBN: 978-93-86347-98-5

Visit the Scientific Publishers (India) website at
<http://www.scientificpub.com>

Printed in India



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FOREWORD

India is the fastest growing pulp and paper market in the world due to increased GDP growth coupled with increasing literacy, growing consumerism and optimism which led to nearly 6% demand growth per annum. But the pulp and paper industries in the country face significant challenges in the form of raw material availability and the associated technological advancements. The availability of wood, non wood and recycled fibre to meet the raw material requirement of existing installed capacity is the biggest challenge faced by these industries. The policy and legal regulations have almost closed the supply from the natural forests which necessitated the establishment of organized pulpwood plantations. Though the organized pulpwood plantation development programme has been implemented by several industries, but still the productivity and profitability of the plantations are dismally modest due to several constraints. The major constraints identified in plantation sector are lack of high yielding varieties, absence of alternate genetic resources, inefficient silvicultural packages and the unorganized supply chain. All these constraints demand suitable research interventions in order to resolve the issues in production, processing and consumption. The Tamil Nadu Agricultural University has conceived and successfully implemented pulpwood value chain model in association with paper industries in Tamil Nadu and resolved the issues indicated above through value chain approach.

I am happy to see that the information and technologies generated have been documented in the form of a book entitled **"Plantation and Agroforestry – Pulpwood Value Chain Approach"**. This book has incorporated four major themes viz., Basic and Strategic, Tree Breeding and Improvement, Silviculture & Agroforestry and Supply & Value Chain issues. This book has included all the strategies towards establishment of pulpwood plantations with the improved genetic resources coupled with the associated supply and value chain process. The information available in this book will be useful to Scientists, Professional Foresters and Pulp and Paper industries involved in the process of augmenting pulpwood plantations in the country. The informations on economics, carbon sequestration and the forest certification process are unique which may find utility by the policy makers, bureaucrats and other associated supply chain managers. I congratulate the authors for bringing out the book on a needy time, judiciously incorporating all the facets of pulpwood plantations and agroforestry and I wish them all success in all their future endeavours.


(K.RAMASAMY)

PREFACE

The demand for wood and wood products in India is increasing rapidly due to population explosion, urbanization, science and technology development and the government policies on education sector. Among various wood products, paper produced from lignocellulosic biomass is very significant and over 30% of the industries are wood based paper industries. These pulp and paper industries face significant challenges in terms of raw material availability, technological limitations and the government policy directions. Among them, raw material availability is a serious concern due to non availability of adequate quantity of quality raw material from the natural forests and the unorganized plantation sector distributed in the country. Though National Forest Policy as early in 1998 directed the wood based industries to source their own raw material resources but for want of suitable technological advancements and the lack of institutional mechanism delimit the process. Under such circumstances, the Forest College and Research Institute of Tamil Nadu Agricultural University has established a sound and viable value chain model for pulpwood PCS through technological, organizational and marketing interventions.

The current book on **“Plantation and Agroforestry – Pulpwood Value Chain Approach”** has been designed judiciously incorporating the technological, organizational and marketing interventions through value chain approach. The book has incorporated four themes viz., Basic and Strategic, Tree Breeding and Improvement, Silviculture & Agroforestry and Supply & Value Chain issues. The theme 1 on Basic and strategic technology incorporated 11 chapters, theme 2 - 11 chapters, theme 3 - 10 chapters and the theme 4 on supply and value chain incorporated 12 chapters. In total, there are about 44 chapters incorporated in this book which outlines the research developments in science and technology leading to augment the pulpwood value chain.

The tree improvement research on various pulpwood species including the wood quality furnished in tree breeding and improvement theme will benefit the scientists and researchers both in academic and industrial sector in order to apply the findings and to moderate the ongoing research activities. The technologies furnished in silviculture and agroforestry theme will not only be useful to the researchers but also find utility to the practicing foresters, farmers and other stakeholders. The economics, marketing, trade and supply chain issues included in the theme supply and value chain will be useful to pulp and paper industries as a ready reckoner to follow the models depicted and to learn the state-of-the-art recent developments in supply and value chain process. The

incorporation of forest certification experience will help the plantation developers and growers to follow them in all their plantation activities.

The book has incorporated all the basic and technological oriented research inputs which we believe that the readers of the book will find them more useful not only for updating the status but also practicing them in the professional pulp wood plantation development and the associated supply chain process. Any suggestions / comments are welcome from the readers in order to improve the content and subject..

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Section - I
BASIC AND STRATEGIC

