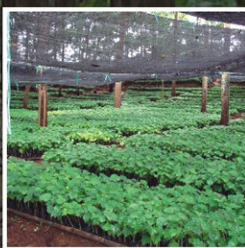


Nursery and Plantation Practices in Forestry



Vinod Kumar



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2nd Edition

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Published by:

Scientific Publishers (India)
5 A, New Pali Road, P.O. Box 91
Jodhpur 342 001 (India)

E-mail: info@scientificpub.com
Website: www.scientificpub.com

Print : 2018

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ISBN: 978-81-7233-715-5 (HB)
978-81-7233-716-2 (PB)
978-93-8814-850-4 (eBook)

© Author, 1999
Second Ed. - 1999
First Ed. - 1995

Lasertype set: Rajesh Ojha
Printed in India

*Dedicated
to the
everlasting memory of
my father
Shri Keshava Prasad*

***"A true conservationist
is a man who knows
that the world
is not given by his
fathers but borrowed
from his children"***

PREFACE

Today the whole world is concerned about environmental protection. It is necessary to preserve the earth's ecological heritage and balance. In order that life support system can survive we must protect the environment and its green cover. During the last several decades the tree lands have suffered widespread disintegration as a result of which ecological ravages have been rampant. Forests as they survive today are the pitiful relics of the past.

The forests have undergone a sea change in the past few decades and are presently under a great stress. The excessive use of forests is leading to a vicious circle of destruction which may become irreversible if not checked in time. Once the topsoil is washed away and soil fertility is lost, neither agriculture nor animal husbandry or horticulture will be able to sustain the people. Therefore, the forests should not be looked as a source of revenue and sustained supply of raw materials but emphasis should be on protection and conservation of forests, environment and wild life. The removal from the forests should be limited to the bonafide requirements of the local masses. Removal on account of silvicultural consideration should also be permitted on a selective basis. The nature has a carrying capacity beyond which it collapses and loses its ability to regenerate.

The human needs that depend on forests are complex and diverse. The human demand extends not only to various goods and services produced by forests but to forest land themselves. The various demands on forests are mutually incompatible. With less than 2 per cent of total forest area in the world the country supports more than 15 per cent of the world's population. The per capita forest land (ha) in various countries are :— India (0.11), USSR (3.6), USA (1.3), Japan (0.2), U.K. (0.4), China (0.13), Thailand (0.5), Italy (0.1), Canada (14.2), Australia (7.6), Nepal (0.3) and World (0.8). The current productivity of India's forests is only 0.7 cu.m./ha/year. The country needs a minimum of 0.47 ha of forest land for every individual against actual availability of 0.11 ha. Therefore, some durable steps should be

taken to bring to halt all kinds of environment disruptions and restore desirable level of ecological integration in land use concepts and practices. The treelands should be managed in an efficient manner so that it may serve several interests such as economic, social and environmental. For forest conservation and development to become socially acceptable and meaningful, efforts are called for to make it a real people's movement.

Forestry in India is at the threshold of a major leap. The tree planting programme is getting momentum year by year. This is urgent to ensure that whole nation now and in future will enjoy a continuous decent and prosperous life. For this large scale plantation is needed to rehabilitate degraded forests and wastelands. Trees in the farmlands are also required. Large scale tree planting will meet the demand of fuel, fodder and timber raw materials for industrial use. Trees will also improve the environment. Forestry and environment are integrally linked to our ecological and economic security. We have to ensure that the ravages of ecological degradation do not wipe away or impede our socio-economic advancement.

Our afforestation and reforestation programme may fail if many technical details regarding planting site, soil, precipitation, seed, nursery, species and micro climate is not fully known to the men engaged in tree planting. Practical foresters and nurserymen have little time to go through the various details required for tree planting. Therefore, an attempt had been made in this book to put together various details required for tree planting and making it comprehensive and meaningful to the foresters need. The information has been taken from numerous references, personal notes and my observations in the field for the last so many years.

Mrs. Rajshree James has rendered valuable help by typing and checking the text.

VINOD KUMAR
IFS

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[Pulp and paper making, constructional work, superior furniture, furniture and cabinet making, spoon and toy, wood carring, veneering and plywood, bullock cart, axe handles and tool handles, cricket bat, hockey stick, racket frames, truck body building, railway coaches, energy plantation, charcoal making, fodder, matchwood, pencil, non-edible oils, tanning, fruit and edible products, nitrogen fixing trees, improving soil fertility, light demander, shade bearer, shade demander, very deeprooted, salt tolerant shrubs, evergreen spp., buttressed stem, species for soil conservation, farm forestry, frost hardy, frost tender, drought hardy, drought sensitive, catchment areas, gum, bidi, dona, oil yielding, spp., silk worm trees, fibre, flosses, lac production, basket, land scape and aestheti valve, roadside planting, attractic hedges, ornamental climbers, trees for birds and animals, bougainvilleas, roses.

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