



University of Agricultural Sciences, Dharwad

37TH SERIES OF STUDENT PROJECT PROGRAMME(SPP)-BIOFUELS PROJECTS: 2013-14

Final Report

Project: Documentation of nursery diseases of *Pongamia pinnata* and developing effective management package in Haveri Forest division (37S_B_MSc_006)



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Karnataka State Biofuel Development Board (KSBDB) and Karnataka State Council for Science and Technology (KSCST)

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FINAL REPORT

37TH SERIES OF STUDENT PROJECTS PROGRAMME – BIOFUELS PROJECT, 2013-2014

I. Title of the project: Documentation of nursery diseases of *Pongamia pinnata* and developing effective management package in Haveri Forest division (37S_B_MSc_006)

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1. INTRODUCTION

India is the sixth largest and one of the fastest growing energy consumers in the world, with a rapidly growing economy, rising population and an expanding middle-class consumers. The International Energy Agency has projected the demand for petro-diesel as 3.2 million barrels per day for 2009, with an annual growth rate of 4.9 per cent (Rhodes, 2008). Due to limited domestic crude oil reserves (0.3% of hydrocarbon reserves of the world). Nearly 72 per cent of crude oil and petroleum products' demands of the country are met through imports. With depleting oil reserves and rising prices, it is that bio-fuels are destined to make a substantial contribution to the future energy needs of the domestic and commercial economies (Azam *et al.*, 2005; Karmee and Chadha, 2005).

Pongamia pinnata is the potential bio-fuel species suitable to wide range of edaphic conditions ranging from waste lands to marginal lands. Estimates say that developing *Pongamia* plantation of 1 M ha solve national fuel crisis. For this, nursery has vital role in rising and supply healthy planting stock. In commercial venture, diseases and insect pests has major role in healthy seedling stock. So, far leaf spots, tar spot, blights and leaf rust in *Pongamia* is in records from India (Jamaluddin *et al.*, 1981). Natalya and Suryanarayana (2006) indicated heavy premature defoliation including seedling mortality under intensively managed nurseries due to leaf spots. Infected seedlings in out plantings introduce disease to new areas and hamper growth. So, timely disease with effective dosage of fungi-toxicants ensure quality planting stock and healthier plantation.

Pongamia pinnata is raised in almost all nurseries in Haveri forest division and 1.35 to 1.5 lakh seedlings/annum is produced to meet demand of social forestry activities. Though impact of diseases on seedlings growth is evident, study on diseases documentation, its magnitude and management measures are lacking. Hence the investigation on, "Documentation of nursery diseases of *Pongamia pinnata* and developing effective management package in Haveri Forest division" was carried out.

2. OBJECTIVES

- 2.1 To survey and document seedling diseases of *Pongamia pinnata* in different nurseries of Haveri forest division.
- 2.2 To develop effective nursery diseases management package