

Title	:	Development of Integrated Dry Land Agroforestry Systems in Tamil Nadu for enhancing livelihood opportunities
Principal Investigators	:	Dr. C. Buvaneshwaran
Co-Investigator	:	Dr. A.C. Surya Prabha
Duration	:	3 Years (2012 to 2015)
Objectives	:	To develop and demonstrate suitable dry land agroforestry systems employing superior planting stocks of multipurpose trees like Neem, Pungam, <i>Ailanthus</i> , <i>Calophyllum</i> , Casuarinas and Teak.
Funding Agency	:	Tamil Nadu State Planning Commission
Summary/Achievements	:	<p>The present project aimed to develop suitable agroforestry systems specific to dry lands of Tamil Nadu, particularly for Ramanathapuram district by combining ecologically adoptable, economically viable and socially acceptable tree species in the farming practices. Also, incorporated superior planting stocks of the tree species such as Neem, Pungam, Casuarinas, Teak, Ailanthus and Calophyllum. On-farm agroforestry plots in 7 ha was laid out - one ha in each of seven taluks of Ramanathapuram district viz. Kadaladi, Kamuthi, Mudukulathur, Paramakudi, Ramanathapuram, Rameswaram and Thiruvadanai.</p> <p>Recommendations:</p> <ol style="list-style-type: none"> 1. Casuarina based wide row alley cropping (8 x 2 m alley) agroforestry system is recommended for Ramanathapuram taluk. However, using of tall planting stocks (which were raised in 20 x 30 cm polybag container) with profuse root systems and having exposed for longer hardening period in the nursery (up to one year) is recommended to achieve better survival and establishment in dry land agroforestry systems in this low rainfall areas with erratic rainfall pattern. 2. <i>Casuarina junghuhniana</i> x <i>Casuarina equisetifolia</i> hybrid clone based boundary planting (with 1 m within row spacing) agroforestry system is recommended for fields under protective irrigation management. Fodder maize can be a suitable crop under this system. 3. Superior windbreak clones of <i>C. junghuhniana</i> released by IFGTB may be recommended for boundary planting (with 1 m within row spacing) or wide row alley cropping (8 x 2 m alley) in soils having high EC and pH values in Kamudi taluk. 4. <i>Ailanthus excelsa</i> can be recommended for boundary planting (with 4 m within row spacing) agroforestry system in Kadaladi taluk and also for agricultural fields which are not protected from stray cattle menace. Use of seed source identified by IFGTB can be recommended for promoting

	<p>Ailanthus based agroforestry systems in the Ramanathapuram district.</p> <ol style="list-style-type: none"><li data-bbox="618 239 1487 449">5. Neem based wide row alley cropping agroforestry (8 x 5 m alley) can be recommended for Paramakudi taluk. Use of best performing 5 clones of IFGTB viz. IFGTB-AI-2, IFGTB-AI-4, IFGTB-AI-5, IFGTB-AI-8 and IFGTB-AI-11 can be recommended for Neem based agroforestry system in the Ramanathapuram district.<li data-bbox="618 470 1487 585">6. Salt tolerant Casuarina based wide row alley cropping (8 x 2 m alley) agroforestry system is recommended for sandy tracts of Thiruvadanai taluk.<li data-bbox="618 606 1487 905">7. Horti-silviculture agroforestry system with inter-planting of <i>Calophyllum inophyllum</i> (at 5 m spacing) in the interspaces in mature coconut farms in Rameswaram taluk. Use of superior planting stocks of <i>Calophyllum inophyllum</i> identified by IFGTB is recommended for better survival and high fruit yield. Further, superior windbreak clones of <i>C. junghuhniana</i> released by IFGTB may be recommended for boundary planting in sandy soils in Rameswaram taluk.
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