Title of the Sub-project: Establishment of agroforestry systems with medicinal plants and trees for conservation, propagation and utilization.

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Project Associate: Dr. C. Buvaneswaran, Scientist-C.

Duration of Project: 2004-2007.

Objective:

1. Standardize cultivation packages for important medicinal plants and trees suitable for agroforestry systems

2. Develop suitable agroforestry models incorporating medicinal plants and trees

3. Encouraging cultivation of medicinal plants and trees through various extension activities

Funding agency: National Medicinal Plants Board

SUMMARY

Established about 4 ha of Amla based agroforestry models in 10 farmers fields with medicinal plants (*Withania somnifera*), and other agricultural crops like red gram, black gram, horse gram, tomato, etc. under rainfed condition. In the amla based agroforestry models, economics of cultivation for various agricultural crops has been worked out and black gram model gives higher economic return to the farmers.

Withania was intercropped under different agroforestry systems and the results showed amla based agroforestry system registered maximum tuber yield of 64 kg/acre. Effect of different spacing of *Withania* was assessed and the results showed that tuber yield varied from 31 to 76 kg/acre under various spacing. By considering market preference on tuber size, spacing of 15X15 and 20X20 cm recorded optimum tuber yield and produced marketable tuber size of *Withania* tube.

Also, established 2.0 ha of Pungam and Neem based agroforestry plots with quality planting material of identified superior parent trees. The effect of pruning on agricultural crop yield under neem based agroforestry has been carried out under 8X4 m spacing of five year old of Neem plot which, showed that 100% pruning increased the annual crop yield by 35% compared to un-pruned area.

Further, 500 Neem cuttings have been developed from the assembled neem clonal bank at IFGTB and planted in the farm field in the espacement of 5X5 m spacing for the purpose of studying the fruit advancement in Neem.

Under the extension programme, two awareness programmes have been conducted in 10 batches for 400 farmers on ‘Cultivation of medicinal plants under farm field’ in various villages of Coimbatore and Theni districts. In these programmes, delivered lectures on various aspects like medicinal plants cultivation, marketing, pest and disease management, etc. by the experts of this institute. In total, 14 pamphlets were prepared in local language (Tamil) and distributed to farmers at the time of awareness programmes.