

Role of live fence Agroforestry in Jaffna peninsula

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Abstract: Live fences are common feature of agricultural landscape in Sri Lanka. However, little information is available on abundance, composition, and their functions. Hence, a study was carried out at five villages, namely Kopay, Evenai, Kaithdy, Uduvil and Tholpuram covering four agricultural instructor ranges in Jaffna Peninsula. Live fences of the homegardens were randomly selected for the data collection. Prevalence of live fence, floristic and faunal composition, structural diversity of the species, biomass of tree species, income and other benefits of live fence were obtained from questionnaire survey and focus group discussions. Prevalence of living fences was high in Jaffna peninsula and ranged from 40 % to 90%. *Commiphora caudata* (Wight & Arn.) Engl. commonly called as Kiluvai was the major woody tree species followed by *Thespesia populnea* (L.) Sol. ex Correa and *Delonix regia* (L.) Gamble with other associated flora, lianas and fauna species. Farmers obtained income from live fences by selling poles with a mean income of Rs. 4, 314 \pm 1,368/ year. Shannon-Wiener diversity Index (SWI) of live fence trees, other flora and fauna were 0.49 \pm 0.09, 0.24 \pm 0.02 and 0.58 \pm 0.07, respectively. Average length of the live fence was 108 \pm 10 m. Total above ground biomass (AGB) and above ground carbon (AGC) contents of live fences were recorded as 67,152 kg and 33,590 kg, respectively.