

126. Grewal, S.S., Singh, Kehar and Juneja, M.L. 1995. Conservation and production potential of an agroforestry system intergrating grey gum (*Eucalyptus tereticornis*), white popinac (*Leucaena latisiliqua*) and turmeric (*Curcuma longa*). *Indian J. Agril. Sci.*, 65(3):191-195.

The paper presents results of an experiment conducted during 1986-92 in the Shiwalik foothills to study the performance of an agroforestry system integrating grey gum (*Eucalyptus tereticornis* Smith) for pole wood on border rows of 40 x 40 m plot, K8 white popinac (*Leucaena latisiliqua* (L) Gillis, syn *L. leucocephala* (Lam.) de/With) for organic mulch and mature in paired rows along the plots of shade loving turmeric (*Curcuma longa* L. Syn. *C. domestica* Val.). The agroforestry system recorded runoff 2.7%, soil loss 0.54 tonne/ha/year with mean monsoon season rainfall of 899 mm compared with runoff 25.4%, soil loss 3.21 tonnes/ha/yr from the field crops raised under comparable conditions. The tuber yield of turmeric varied from 0.56 tonne/ha in low rainfall to 4.73 tonnes/ha in high rainfall years with the mean annual yield 2.34 tonnes/ha and net return Rs. 3,184/ha. White popinac provided 290 kg oven dry foliage in 4 years for mulching and its subsequent incorporation and added 91.9, 4.2 and 44.3 kg/ha of N, P and K, respectively into the soil. Grey gum poles (380) harvested after 6.5 years gave income of Rs. 18,380. The agroforestry system generated cash return of Rs. 5,642/ha/year compared with Rs. 2,997 from rainfed crops and thus proved economically more viable.