

209. **Dyal, S.K.N., Grewal, S.S. and Singh, Shiv Charan. 1996.** An agri-silvi-horticultural system to optimize production and cash returns for Shiwalik foothills. *Indian J. Soil Conserv.*, 24(2):150-155.

Results of an agri-silvi-horticulture system (ASHS), integrating *Leucaena leucocephala* (*subabul*) var. K-8 as border row for fuelwood and fodder/organic mulch and manure,

*Citrus aurantifolia* var. Baramasi (lemon) in the next peripheral row, *Carica papaya* (Honey Dew) (1.8 x 1.8 m) in the main plot and shade loving, *Curcuma longa* (turmeric) as intercrop conducted for first 5 years under irrigated and then for 3 years under rainfed conditions on a well drained sandy loam soil of Shiwalik foothills near Chandigarh has been presented. *Leucaena* plants attained an average basal girth of 26.3 and 41.2 cm and provided fuelwood yield of 5.24 and 7.53 t ha<sup>-1</sup> after the first and second rotation of 4 years each. The mean airdry branchwood yield from *Leucaena* was 4.70 and 5.11 and foliage 2.1 and 3.2 t ha<sup>-1</sup> whereas fruit yield obtained from papaya was 4.24 and 1.94 t ha<sup>-1</sup> respectively. Lemon gave 1.10 and 0.86 t ha<sup>-1</sup> and turmeric (tuber) 0.89 and 0.53 t ha<sup>-1</sup> with and without irrigation, respectively. The mean annual net returns were Rs. 17,752 and Rs. 15,092 under ASHS as against Rs. 7,752 and Rs. 3,342 ha<sup>-1</sup> from agricultural cropping system (maize + blackgram/wheat + mustard/maize + wheat) under irrigated and rainfed conditions, respectively. The ASHS was found superior than agricultural cropping system under both situations.