

664. Grewal, S.S. 1995. An *Eucalyptus* and *bhabar* grass plantation system to optimize resource use for biomass production in the foothills of sub-tropical north India. *J. Trop. For. Sci.*, 8(1):87-106.

Presents results of a field study conducted during 1984-91 on eroded alluvial soil with *bhabar* grass (*Eulaliopsis binata*) uniformly intercropped under *Eucalyptus tereticornis* planted at 2500 ha⁻¹ for polewood in a north-south oriented paired rows system allowing better canopy adjustment and light conditions. The response to six *Eucalyptus* planting treatments i.e. usual pits of 0.3 m³ (T1), shallow augerhole SAH (6 x 60 cm)(T2), deep augerhole DAH (6x120 cm)(T3), DAH filled with 1 kg farm yard manure (FYM) (T4), DAH filled with 1 kg of rice husk (RH)(5), and DAH+FYM+RH (T6), was studied to find out the best practice that promotes tree growth and minimizes competition for moisture. After seven years, the best treatment of DAH+FYM (T4), and the worst pit planting (T1) recorded a survival of 84 and 53%, DBH of 9.7 and 8.6 cm, pole biomass of 67.1 and 28.5 air dry tonnes, marketable number of poles 21009 and 1328 and annual net returns from trees and grass Rs. 10659 and Rs. 6239 ha⁻¹yr⁻¹, respectively against Rs. 700 ha⁻¹yr⁻¹ from rainfed field crops. DAH without FYM (T3) and SAH (T2) followed the best treatment. Rice husk (high CN ratio) seriously depressed tree growth. The grass yield under tree planting treatments was almost uniform and varied from 11 t ha⁻¹ in good to 2 t ha⁻¹ in poor rainfall years.