

- rainfall years.
665. Grewal, S.S., Singh, Kehar, Juneja, M.L. and Singh, Shiv Charan. 1996. Relative growth, fuelwood yield, litter accumulation and conservation potential of seven *Acacia* species and an understorey grass on a sloping bouldery soil. *Ind. J. For.*, 19(2):174-182.

The performance of seven *Acacia* species was compared in a long term (1976-1992) field study conducted on a 35-40% sloping eroded bouldery soil in Shiwalik foothills. The species were planted at 3 x 3m spacing in contiguous blocks on the berms of 150 x 45 x 45 cm size staggered contour trenches made against the overland slope. Subsequently, a sod forming perennial grass (*Eulaliopsis binata* Retz., used for paper pulp) was uniformly planted at 75 x 75 cm spacing in the understorey. *Acacia suma* recorded the maximum height (1413 cm) and dbh (26.3 cm) after 16 years of growth; followed by *Acacia lenticularis* (1263 cm height, 21.6 cm dbh). The fuelwood yield from poles followed the order : *Acacia nilotica* (39.34 t/ha), *Acacia tortilis* (36.36), *Acacia senegal* (26.94), *Acacia modesta* (20.81), *Acacia lenticularis* (19.11) and *Acacia suma* (14.64). The highest net returns of Rs. 32,212 and 23,972 ha⁻¹ were given by *Acacia nilotica* and *Acacia tortilis*. The 10 years (1983-1992) mean annual *bhabar* grass yield was highest under *Acacia senegal* (3.51 t/ha) followed by *Acacia tortilis* (3.07 t/ha) and average of all species as 2.49 t/ha. The 4-year (1989-1992) mean runoff from a representative block of *Acacia tortilis* and grass was only 1.75% and soil loss 0.21 t/ha/yr with the mean monsoon rainfall of 904 mm. The leaf litter accumulation varied from 6.73 under *A.suma* to 10.0 t/ha under *Acacia lenticularis* with a mean of 8.67 t/ha. The eroded bouldery slopes, thus, could be well-managed by planting *Acacia nilotica* alongwith *bhabar* grass.