

in grass yield was faster on sandy loam than on silty clay soil.

990. **Grewal, S.S., Juneja, M.L. and Singh, Kehar. 1994.** Rainwater conservation and use by an energy plantation of *Eucalyptus tereticornis* and rainfed field crops in North India. *Journ. Trop. For. Sci.*, 6(4):408-421.

A short duration, high density (10,000 trees/ha) energy plantation of *Eucalyptus tereticornis* was raised on a typical sandy loam soil in Shiwalik foothills. The efficiency of rainwater conservation and its use was compared with sesame-rapeseed crops conditions. The 300 cm deep soil profile of the agricultural land use system (ALUS) conserved 45, 84 and 181 mm and that of the forestry land use system (FLUS) conserved 3111, 240 and 445 mm of water from the monsoon rainfall of 685, 905 and 1586 mm recorded in 1985, 1986 and 1988, respectively. The respective mean gains were 68 and 244 mm of water. The exceptional drought of 1987 produced no net gain for either system. The monsoon rainfall recharged the soil profile upto a depth of 150 cm in the ALUS but upto 240-300 cm depth in the FLUS. The annual water uses were 774, 806, 417 and 816 mm for the ALUS and 976, 1062, 435 and 1141 mm for mean annual and total water uses were 801 and 2803 mm, respectively for the ALUS and 1033 and 3614 mm, respectively for the FLUS. The

29% extra water by conserving rainwater which was wasted by the ALUS as runoff. The FLUS increased soil moisture deficits in deeper soil layers before and between the monsoon rainfall events resulting in high infiltration. As against field crops, *Eucalyptus* was a relatively more efficient user of rainwater.