

977. **Vishwanatham, M.K., Ram Babu and Joshie, P. 1994.** Effect of forest cover on runoff, sediment, peak rates and economics in small watersheds of outer Himalayas. Proc. Vol. I, 8th Intl. Soil Conservation Conference, Dec. 4-8, 1994, New Delhi, India (1997): 379-393.

To determine soil and hydrological changes as a result of reforestation of a watershed having miscellaneous vegetation, a study was conducted at Selakui, Dehradun since 1961. Two fan-shaped protected watersheds (1.45 and 0.87 ha) with undulating topography were taken up for the study. The watersheds were calibrated for 8 years (1961-68). One of the watersheds was clearfelled and planted with *Eucalyptus camaldulensis* and *E.grandis* at 2m x 2m while the other was left undisturbed. The study showed effectiveness of afforestation with *Eucalyptus* species, reducing runoff by 20%, peak rates by 30-73%, and soil loss by 4 t/ha/yr. Higher nitrogen and potash contents (84 and 120 kg/ha) observed in the understorey of *Eucalyptus* than in brushwood vegetation (74 and 115 kg/ha) explained better soil environment under the former. The main and first coppice of *Eucalyptus* species with projected costs and benefits gave higher benefit-cost ratio of 2.06 at 10% discount rate.