302. **Mittal, S.P., Grewal, S.S., Agnihotri, Y. and Sud, A.D. 1992.** Substitution of

nitrogen requirement of maize through leaf biomass of *Leucaena leucocephala*: agronomic and economic considerations. *Agroforestry Systems*, Netherlands, 19: 207-216.

The effects of substitution of nitrogen requirement of maize through *Leucaena* leaves were studied on runoff, soil loss, maize and wheat yield and economic returns. The treatments were (1) 80 kg N ha^{-1} all through *Leucaena* leaves (80 L), (2) 40 kg N through *Leucaena* leaves + 40 kg N ha^{-1} through fertilizer (40 L + 40 F), (3) 20 kg N through *Leucaena* leaves + 60 kg N ha^{-1} through fertilizer (20 L + 60 F), (4) 80 kg N ha^{-1} all through fertilizer (80 F), and (5) control (No fertilizer). Green *Leucaena* leaf biomass (containing 3.3% N on dry basis) was incorporated every year in 15 cm top soil two weeks before sowing of summer maize. Runoff was reduced marginally in treatment 20 L + 60 F. Mean minimum soil loss (6.202 t ha^{-1}) also occurred in treatment 20 L + 60 F. Mean maximum yield of maize was obtained with 20 L + 60 F. Residual effect of incorporation of *Leucaena* leaves to maize crop was observed on wheat yield. Significantly higher mean net returns (Rs. 6,811 ha^{-1}; one US$ = Rs. 30) were obtained with 20 L + 60 F. The study suggests that substitution of N through *Leucaena* leaves even in small quantity may be helpful.