

Junoo Kamal Tuladhar

Ecology and Development Series No. 13, 2003

The Effect of *Azolla* on Nitrogen Use Efficiency in Rice-Wheat Rotations of Nepal

The low productivity of the rice-wheat cropping system in Nepal is associated with a low use efficiency of applied mineral N in rice. The aquatic fern *Azolla* was used to reduce N losses via ammonia volatilization from the flooded lowland rice in farmers' field conditions in Nepal. The *Azolla* cover changed the floodwater chemistry, thus reducing ammonia volatilization losses. The use of *Azolla* in combination with urea increased rice yields by 15% and reduced urea-N losses from 17-38% to 2-8%. A combined use of *Azolla* and urea is a viable option to enhance the productivity of rice-wheat systems in Nepal.