

Rice Weeds Make for Weedy Crop

Rice-wheat and rainfed lowland rice systems cover approximately 48 million hectares of land in South and South-East Asia, supporting many of the poorest people in these regions as well as being critical for regional food security.

Weeds are a major problem for rice growers. In the rice-wheat system, research has shown that direct seeding instead of transplanting can save on fuel, labour and water and raise the productivity of the system, but weed problems are more severe. In lowland rainfed rice, studies show that farmers could increase their yields by 40% if they carried out additional weeding, but poor farmers often lack access to sufficient labour to do this.

In view of the potential gains from improved weed management, the CPP has initiated two projects which will develop low-cost, labour-efficient methods of weed management for both direct seeding and transplanting systems. The projects are looking at a range of weed management practices, including the integration of herbicides and mechanical weeding.



Farmers evaluate direct seeding trials at Pantnagar, India (R7377)

The research is at an early stage, but project leaders have already developed strong links with international research centres in the region. These centres work in partnership with national research organisations, and, via these national programmes which adapt research findings for local conditions, CPP-funded work can reach many more farmers in poor countries.

The rice-wheat project is working closely with the International Rice Research Institute (IRRI) and GB Pant University. These partnerships provide good linkages with the



A farmer group identifies problem weeds in Comilla, Bangladesh (R7471)

Consultative Group (CG) Rice Wheat Consortium (RWC), which is jointly organised by the International Maize and Wheat Improvement Centre (CIMMYT) and IRRI. This consortium of national and international agricultural institutions is working to raise the productivity of rice and wheat in a sustainable fashion. The link provides the CPP projects with opportunities to exchange information about research in this area, to scale up promising technologies and to promote successful findings through national organisations working with farmers.

The rainfed lowland rice project is working with a similar network, the rainfed lowland rice research consortium (RLRRC), which is coordinated by IRRI, and with a local partner, the Bangladesh Rice Research Institute (BRRI). Particular emphasis has been placed on strengthening the participatory on-farm research component of the RLRRC programme through the establishment of farmer focus groups, household level studies and on-farm trials.

Both projects are also looking at the potential for the use of rice cultivars that can compete more effectively with weeds. These were developed, with DFID support, by the West African Rice Development Association (WARDA), a member of the CG system, demonstrating that CPP research is drawing on relevant research findings from around the world.

R7377: *Weed management for direct seeded rice, D. Johnson, NRI*

R7471: *Developing weed management strategies for rice-based cropping systems in Bangladesh, C. Riches, NRI*