

Rice is Greener on the Other Side

In the Kyela District in the Southern Highlands of Tanzania rice is an important cash crop, grown for cultural as well as economic reasons. Investigations by project R8194 have shown that the yield of rice over the past 30 years has declined from approximately 20 bags to an average of 2 bags per acre (0.4 hectares). Farmers identified the cause to be reducing soil fertility and increasing infestation by the parasitic weed *Striga asiatica*. On germination, *Striga*



Rice crop severely infested by *Striga* (red flowers)

grows into the host plant absorbing nutrients from it. Early infection not only stunts growth but prevents the plant from producing any yield. The target adopted by the project team was to restore rice yield to an average of 20 bags per acre. They are using 'green manure' cover crops, either *Crotalaria* (Marejea) or pigeonpea, in rotation with the rice both to control *Striga* and to improve soil fertility. The effectiveness of this



Trial rice (green) grown in rotation with *Crotalaria* is higher yielding than continuously cropped rice

technology had been verified through project R7564, led by the Natural Resources Institute. During the current promotional project farmers have already experienced a fourfold increase in rice yield with this method compared to continuous rice cropping. Demand for *Crotalaria* seeds is such that they have become a marketable commodity.

Farmers' groups participating in the project have been keen to inform others about the benefits of cover crops. The project has facilitated farmer-to-farmer visits which have led to new groups establishing cover crop demonstrations. The Kyela District administration is very supportive of the project and organised a field day for farmers attended by District Commissioner, District Executive Director and councillors.

Schools participating in the project are developing learning tools, which include *Crotalaria* demonstration plots, poems, songs, drama and dance; all carrying a message on the use of *Crotalaria* to increase soil fertility and control *Striga*. The Government is also supporting the use of green manure. At the 2003 National Agricultural Show, in Morogoro, the Prime Minister stressed that resource-poor farmers, who cannot afford inorganic fertiliser, should use green manure.



Farmer admires *Crotalaria* plant stand

R8194: On farm verification and promotion of green manure for enhancing upland rice productivity on *Striga* infested fields in Tanzania

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