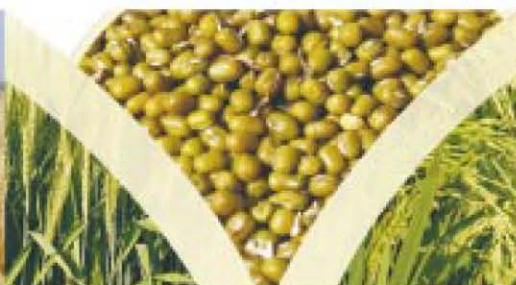




# Abstracts

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under diminishing water supply, water efficient conservation agriculture technologies like aerobic rice with optimum residue management and reduced tillage can reduce water use sustaining the productivity. Thus, a research on water saving potentiality through the cultivation of rice in permanent raised beds and zero tillage condition with three levels of residue retention was conducted in Khorezm region of Uzbekistan in 2008. In this paper, productivity and water saving potentiality through the cultivation of aerobic rice in irrigated drylands of Uzbekistan are presented.

## Evaluation of Different Crop Establishment Methods on Yield and Yield Attributes of Rice (*Oryza sativa* L.) under MWPZ of U.P., India

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A field experiment was conducted during *kharif* 2006 and 2007 with 3 crop establishment methods SRI, ICM, standard practice (with same dates of sowing and same dates of transplanting) keeping one treatment farmers practice as common. On the basis of results it is revealed that SRI and ICM being at par in yield attributing characters produced significantly higher grain yield over rest of the treatments.

## Direct Seeding Mulch Based Cropping Systems (DMC) as a Means to Improve the Economy of Small Scale Farmers in Madagascar

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Most of the lowlands in Madagascar are used as paddy fields but the production from this system is no longer sufficient to meet the needs of a fast growing population. Therefore, upland rice and other rainfed crops are developed by farmers on the hillsides despite the low fertility of soils in this type of environment. Also, most of the soils are on steep slopes and the effect of erosion may be devastating due to high rainfall intensity in many areas. For these reasons and thanks to CIRAD backstopping from Brazil, Direct Seeding Mulch based Cropping (DMC) systems have been developed (10 years of adaptation research) and extended since 2002 in several agro ecological zones of Madagascar. In the hillsides (*tanety*) the systems mostly used by small scale farmers are the association of food crops (rice, maize, peanut, ground nut) with *Dolichos lablab*, *Vigna unguiculata* or *Vigna umbellata* or rice on residues of *Stylosanthes guianensis*. It was found that significant effects of DMC on yields were obtained after an accumulation of biomass during 3 years. When the biomass is not enough due to low development of the cover crops or loss of biomass by overgrazing, a problem of weeds is frequent during the following seasons. In such a case, farmer will be tempted to go back to tillage. They can also use glyphosate and add some mulch from outside the plot. On the other side, when a good accumulation of biomass is obtained, there is a rapid increase in soil fertility, a better weeds control, especially *Striga asiatica*. Higher yields and lower labour costs (no- or reduced- weeding and no tillage) with DMC result in higher profits for farmers, when high striga pressure often leads to abandon of degraded land with traditional techniques. The analysis of more than 2000 plots shows that production and profits increase with time: the higher the number of years of DMC, the higher the profit of the farmer and the higher the gross margin per man-day.