

Studies on Improvement of System Productivity Through Introduction of Pre *Kharif* Crops in Rice (*Oryza sativa* L.) Based Cropping System

U Sai Sravan, K V Ramana Murthy, A V Ramana and N Sunanda
Department of Agronomy, Agricultural College, Naira 532 185, Andhra Pradesh

ABSTRACT

A field investigation was conducted during pre *kharif*, *kharif* and *rabi* 2012-13 on sandy clay loam soils of Agricultural College Farm, Naira to find out the effect of preceding crop on performance of succeeding rice and rice fallow blackgram. The experiment was laid out in randomized block design with four replications and seven treatments. Significant differences were noticed with pre *kharif* crops on yield attributes and yield of rice and yield of rice fallow blackgram. Significantly superior performance of rice was observed for all these parameters with sunhemp (T₂), while greengram (T₃) was the next best treatment. The seed yield of rice fallow blackgram was significantly superior with sunhemp (T₂), while the lowest with fallow (T₁). Although highest net returns ha⁻¹ and system productivity was recorded with bhendi-rice-rice fallow blackgram (T₇), the returns per rupee invested were highest with sunhemp-rice-rice fallow blackgram (T₂).

Key words : Crop residues, *Kharif* rice, Pre *kharif* crops, *Rabi* rice fallow blackgram, System productivity