



## Standardization of spacing and weed management practices in SRI system of rice cultivation under organic conditions in relation to sustainable agriculture in the changing scenario of climate

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### Abstract

A field experiment was conducted during *kharif* seasons of 2009 & 2010 at Model Organic Farm of Department of Organic agriculture, CSK Himachal Pradesh Krishi Vishvavidyalya Palampur in factorial randomized block design with three replications consisting of eight treatment combinations. The treatments included two methods of weeding (mechanical weeding with cono weeder & hand weeding) and 4 spacings (25x25, 30x30, 20x20 and 30x20 cm). Rice variety RP-2421 was transplanted in second week of July during both the years following all organic packages of practices. The weeding was done at 20 & 40 days after transplanting rice. The dominant species of weeds were *Echinochloa crusgalli*, *Digitaria sanguinalis* and *Panicum dichotomiflorum* among grasses; *Cyperus iria* and *Cyperus difformis* among sedges and *Aeschynomera indica*, *Ammania* spp and *Commelina benghalensis* among broadleaved weeds. The experimental results revealed that 2 mechanical weedings with cono-weeder at 20 & 40 DAT resulted in significantly higher values of yield attributes *viz.* effective tillers/m<sup>2</sup> & panicle length and hence higher paddy yield and lower weed dry weight over hand weeding twice (20 & 40 DAT). However, grains/ panicle and 1000 grain weight did not vary significantly during both the years. Among spacings 30x30 cm being at par with 25x25 cm & 30x20 cm recorded significantly higher paddy yield and lower weed dry weight over 20x20 cm during both the years. The interactions between method of weedings & spacing were observed to be non-significant during both the years of study.

**Keywords:** *organic, spacing, weed management*