



# Comparison of conventional practice and SRI method of hybrid rice cultivation on farmer's fields in central plain zone of Uttar Pradesh

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**Abstract :** A study was conducted on farmer's field in Fatehpur district (U.P.) during *Kharif*, 2008 to compare conventional and SRI methods of hybrid rice cultivation. The SRI involved transplanting of 10 days old single seedling/hill at 25x 25 cm spacing and 20 t/ha FYM application. Conventional method involved transplanting of 25 days old 2 seedlings/hill at 20 x 10 cm spacing and 150 kg N + 60 kg P + 40 kg K fertilizers/ha. SRI method improved growth and yield attributes of hybrid rice 'PHB - 71' by the large margins over conventional method. It produced 83.20 q/ha grain yield and earned Rs. 64620/ha with 3.48 B:C ratio against 61.80 q/ha grain yield and Rs. 41240/ha return with 2.00 B:C ratio under conventional method of hybrid rice cultivation. In SRI method, NPK + FYM @ 10 t/ha or FYM alone @ 20 t/ha gave higher grain yield (83.80 and 83.10 q/ha) and net return (Rs. 64151 and 64520/ha) than inorganic NPK with 75.30 q/ha grain yield and Rs. 57651/ha net return.

**Key Words :** Hybrid rice, SRI, Productivity, Economics, Soil fertility

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## INTRODUCTION

System of rice intensification (SRI) is particularly well suited for cultivation of hybrid rice, since it not only saves the seed cost (75 % saving) but also helps in saving water (30-40%). Research conducted so far in multilocational trials has clearly indicated that hybrids perform better under SRI method of cultivation as compared to high yielding varieties (Subbaiah *et al.*, 2005). So it is recommended that where ever feasible, SRI method of cultivation can be adopted for rice hybrids. Therefore, keeping it's importance in view, this new method of hybrid rice technology (SRI) was tested by the scientists of KVK, Fatehpur on farmer's fields during *Kharif*, 2008.

## MATERIALS AND METHODS

The study was carried out with rice hybrid PHB-71. It

was tested under conventional method *vis-à-vis* SRI method of cultivation. In conventional method, 20 kg seed was sown in nursery for one hectare transplanting. Seedlings of 25 day age were transplanted at 20 cm x 10 cm spacing keeping 2 seedlings per hill. Fertilizers were applied @ 150 kg N + 75 kg P + 60 kg K + 25 kg ZnSO<sub>4</sub>/ha along with 10 t/ha FYM. Weeds were controlled by the application of Butachlor herbicide @ 3 kg/ha in standing water. Submergence of water was maintained throughout crop season.

In SRI method, only 5 kg seed was sown in nursery for transplanting in one hectare area. Seedlings of 10 day age were transplanted at 25 cm x 25 cm spacing keeping single seedling per hill. No inorganic fertilizer was applied, but 20 t/ha FYM was applied a fortnight before transplanting. Weeds were control by mechanical weeder. Alternate wetting and drying of soil was maintained till flowering then flooding of water was done. Other operations were done uniform in both methods of cultivation. Transplanting and harvesting were

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