

To be posted on India page:

FIRST TRIAL RESULTS FOR 'SYSTEM OF WHEAT INTENSIFICATION'

Colleagues at People's Science Institute (PSI) based in Dehradun and working in Himachal Pradesh and Uttarakhand in northern India have completed the first trials that we know of applying SRI concepts to wheat production. These results were reported at the 2nd National SRI Symposium held October 3-5 in Agartala, Tripura State.

With wheat there, is no change in management as large as moving from anaerobic to aerobic soil conditions with SRI. However, using two different varieties of wheat, PSI evaluators found that the best use of wider spacing and other SRI-inspired practices – together with direct seeding at fixed spacing – produced 28 to 40% more grain yield and 18% more straw yield – compared to the best control results using standard broadcasting methods of crop establishment at the research farm at Dehradun (see [tables](#) presented at the Agartala symposium).

Next season, PSI will do further on-farm trials with 'SWI,' including use of seed drill and weeder within an SRI framework to reduce labor costs. These first trials showed that wheat plants respond similarly to rice plants when their growing environment is changed. This may encourage others to undertake similar kinds of experiments with other crops. Other Indian NGOs -- PRADAN in eastern India and Green Foundation in Karnataka – have already found that finger millet (ragi) responds favorably to SRI concepts and practices with much higher grain yield.

Comparison of results for SWI and conventional method of HD-2329 wheat variety at Dehradun

Particulars	SWI				Conventional	
Row-to-row spacing (cm)	20 X 20	15 x 15	10 x 10	15 x 15	Broadcasting	
Plant-to-plant spacing (cm)	20 X 20	15 x 15	10 x 10	10 x 10		
Area (sq.m)	69	72	78	72	164	182
Average no. of tillers (range)	16 (8-23)	20 (8-36)	20 (8-32)	23 (9-39)	5 (2-9)	5 (2-9)
Average plant height (cm)	90	92	84	84	71	71
Average no. of panicles per plant	16	15	15	15	4	4
Average panicle length (cm)	12	10	11	10	7	6
Average no. of grains/panicle	66	49	53	49	38	37
Grain yield (Q/Ha)	21	20	20	23	18	16
Straw yield (Q/Ha)	74	85	74	80	72	64

**Highest SWI yield with this variety was obtained with spacing:
15 cm x 15 cm row-to-row and 15 cm x 15 cm plant-to-plant**

Comparison of results for SWI and conventional method of PBW-396 wheat variety at Dehradun

Particulars	SWI				Conventional	
Row-to-row spacing (cm)	20 X 20	15 x 15	10 x 10	15 x 15	Broadcasting	
Plant-to-plant spacing (cm)	20 X 20	15 x 15	10 x 10	10 x 10		
Area (sq.m)	71	78	80	70	170	160
Average no. of tillers (range)	17 (10-27)	15 (7-22)	17 (7-36)	11 (6-16)	4 (2-8)	5 (2-9)
Average plant height (cm)	84	80	80	80	74	71
Average no. of panicles per plant	12	10	10	14	5	4
Average panicle length (cm)	14	12	11	11	7	76
Average no. of grains/panicle	51	67	56	55	36	28
Grain yield (Q/ha)	25	23	21	22	15	14
Straw yield (Q/ha)	78	74	72	76	66	64

**Highest SWI yields with this variety were obtained at spacing:
20 cm x 20 cm row-to-row and 20 cm x 20 cm plant-to-plant**