

System Of Wheat Intensification (SWI)

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Background

- Food requirement of India is increasing with ever increasing population.
- Indian agriculture must continuously evolve to remain ever responsive to meet the food requirement, and to meet the growing and diversified needs of different stakeholders in the entire production to consumption chain.
- In order to capitalize on the opportunities and to convert weaknesses into opportunities, there is a need to intensify the cultivation of crops by using optimum input through BMP (Best Management Practices) for resource conservation.
- Wheat intensification is a new concept and goes with the system of rice intensification (SRI) principle.
- In the case of SWI, all agronomic principles of SRI are put into practices and integrated with the package of practices of wheat crop.

About SWI

- The technology which has high potentiality to provide high wheat yield per drop of water and per kg of agricultural inputs (fertilizer, seed etc.) and application of other SRI principle to wheat crop, is known as system of wheat intensification.
- Adoption of this technology can increase the productivity of wheat by more than 2 times .
- Lead SRI researchers are spearheading new research on applying SRI methods to wheat cultivation in China and

Madagascar. The methodology, dubbed as the system of wheat intensification (SWI) has improved wheat yields for small scale farmers in India, while reducing input costs and labour.

- Evidence is accumulating that once farmers become more comfortable and skilled with the new methods, SWI can become labour saving with infrastructural support, particularly farm mechanization.
- Engagement of labour can be reduced with the use of seed drill and cono weeder instead of tedious line sowing and manual weeding, respectively.
- The time required for plot preparation, planting and to cover seeds with soil is almost half to that of conventional plots, resulting in a less labour-intensive method.
- For irrigation, intermittent wetting and drying methods will save labour significantly instead of maintaining water at field situations under conventional practice. And for these reasons, farmers ranked labour-saving as the greatest attraction of SWI, more than its water-saving, and more than its increases in yield and profitability .
- It has been reported that Indian farmers improved wheat yields by 2 and 3 times higher than those from conventional methods .
- SWI practices have spread quickly in India including Bihar, Chattisgarh, Madhya Pradesh, Odisha, Punjab and Uttar Pradesh, where farmers have spontaneously begun applying the principles to other crops, such as millet, mustard, soybean, eggplant, and maize. Collectively, these practices are becoming known as a system of crop intensification.