System of Rice Intensification

The **System of Rice Intensification** (**SRI**) is a way to grow rice. This plan for farming may grow more rice in the same field. It uses less water, takes more work, and uses younger seedlings spaced apart. SRI calls for hand weeding with special tools. It was started in 1983 by the French Jesuit Father Henri de Laulanié in Madagascar.[1] Full testing and spread of the system throughout the rice growing parts of the world did not happen until some years later with the help of schools like Cornell University.

History and main ideas of SRI

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Writing the plan now called SRI started in the 1960s when Fr. de Laulanie kept notes on growing rice. The SRI plan includes using less water and hand planting very young seedlings in a square.[1] The SRI plan continues to change. Sometimes people try to use only rain for water, and sometimes people try to plant seeds instead of young plants. The main parts of SRI plan written by Cornell University, New York are:[2]

- Rice field soils are kept moist, not always full of water. Less water in the soil helps root growth and helps keep the soil full of helpful organisms.
- Rice plants are planted alone and spaced wider apart to permit roots to grow more and give every leaf more sunshine.
- Rice seedlings are planted young, less than 15 days old with just two leaves. Planting should be fast, and not hard to avoid hurting the roots and causing shock to the plants.

Spread of SRI

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Thanks to Norman Uphoff, the SRI plan has spread from Madagascar to many places around the world. Norman Uphoff was director of the Cornell International Institute for Food, Agriculture and Development at Cornell University, Ithaca, New York from 1990 to 2005. In 1993, Uphoff met officers from Association Tefy Saina, the non-governmental organisation set up in Madagascar in 1990 by de Laulanie to try SRI. After trying the SRI plan for three years, Malagasy farms that made about 2 tons/hectare improved to about 8 tons/hectare. Uphoff believed the SRI plan works, and in 1997 started to tell groups in Asia about SRI. Uphoff estimates that by 2013 the number of small farms using SRI had grown to between 4 and 5 million.[3]

Does SRI Work?

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Believers and unbelievers of SRI talk about the SRI claims, and many questions about it remain unresolved.[4] Wageningen University has also published an article discussing the problems of measuring SRI. This paper ended by saying: "Although the technical aspects of SRI have been contested, it clearly exists as a real social phenomenon".[5]

The question now seems to be: is SRI better at making more rice and other benefits to rice farmers, such as healthier soils, when compared with older, trusted ways for growing rice?[source?]

Proponents and critics of SRI debate the claimed benefits and many questions about it remain unresolved.[6] Wageningen University has also published an article discussing the challenges of evaluating SRI in which one concluding sentence read: "Although the technical aspects of SRI have been contested, it clearly exists as a real social phenomenon".[5]

The question at hand seems to be: is SRI better at delivering increased yield and other benefits to rice farmers, such as healthier soils, when compared with established recommended best management practices for rice production?

Cases of success

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Believers of SRI claim it grows more rice, saves water, reduces costs, and raises income and that benefits have been achieved in 40 countries.[7] Uphoff published an article in the International Journal of Agricultural Sustainability that states that SRI "can raise irrigated rice yields to about double the present world average without relying on external inputs, also offering environmental and equity benefits".[8]

A special issue on SRI in the trade journal Paddy and Water Environment (not related to schools) collected recent findings in support of SRI.[9]

In 2011 Five farmers beat the old yield record,[10] the best was a young farmer named Sumant Kumar setting a new world record in rice yield of 22.4 tons per hectare using SRI, beating the existing world record held by the Chinese scientist Yuan Longping by 3 tons.[3][11][12] In 2014 S Sethumadhavan from Alanganallur, India grew a record yield of nearly 24 tons of paddy rice per hectare using SRI.[13]

Criticism

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How well SRI works is still debated between believers and unbelievers of the plan.[14][15] Critics of SRI say that claims of high yield in SRI are due to unscientific reporting. They object that there is a lack of details on the methodology used in trials and a lack of printed reports in the peer-reviewed literature (related to schools and universities). Some unbelievers have suggested that SRI success is unique to soil conditions in Madagascar.[16] While unbelievers still claim this, there are over 700 articles and printed reports about SRI that are published in international scientific journals as of January 2016.[17]

SRI picture gallery

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Below is a picture gallery of SRI farming in Chhattisgarh, India:

- Planted field

Planted field

- Fields left almost dry

Fields left almost dry

- Farmer

Farmer

Related pages

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- Organic farming

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Other websites

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