

A Policy-Maker's Perspective on SRI from SRI LANKA

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It is with great pleasure that I join so many SRI adopters and adapters from Asia, Africa and Latin America in this first international conference on the System of Rice Intensification. The review and sharing of experience and the deliberations undertaken here should be of great value for setting future directions to make SRI a more useful intervention for promoting sustainable agriculture in our countries.

My comments will be those of someone who has had responsibility for government policies in the areas of agriculture, lands and poverty reduction, and as someone who has personally practiced SRI. For me, SRI is not a matter of theory but of beneficial practice.

Rice is important not only because it is the staple food for millions of people, but also because it provides livelihoods for millions of people who employ substantial amounts of our natural and human resources in the production process. The land that is devoted to irrigated rice production cannot be put into some other use in the short run due to the ecological functions it performs and the specialized irrigation facilities already established. Increasing the productivity of the resources currently devoted to rice production is imperative for multiple purposes as development in the rice sector is development for land and for people.

The Rice Sector Situation in Sri Lanka

Sri Lanka possesses a long and proud history of utilizing its land and water resources effectively for paddy farming over most of the last 2,500 years. The country was called “the Granary of the East” in the ancient past, thanks to the magnificent irrigation systems developed and maintained with skill and commitment from the state leadership and the people. The scope

and success of this agricultural endeavor are indicated by the more than 2,000 traditional varieties of rice possessed by our farmers.

However today, despite contributions of the Green Revolution of the 1960s and 1970s, Sri Lankan farmers face a spate of problems.

- The average paddy plot per household is less than 0.4 hectares, not enough to produce prosperity for the whole family given low levels of productivity.
- Farmers have a problem of water scarcity as the amount available for cultivating their small plots is diminishing year by year.
- Farmers experience problems with their soil, whose quality has been deteriorating due to the excessive use of chemical fertilizers and agro-chemicals.
- They frequently have difficulties in getting good seed of an appropriate variety in the required quantities at the needed time.
- Farmers also have constraints of labor availability due to the present unattractiveness of paddy cultivation with its low returns to family members and the high cost of hired labor.
- Specifically, many farmers have problems of land preparation due to the high cost of farm machinery and the declining rearing of farm animals.
- There is limited investment capital available due to the low returns on investment in the rice sector.
- When they do have a good harvest, farmers commonly have problems of storage and even lower prices.
- Finally, with unattractive prices for their production, rice growing has become an unprofitable venture.

Although the Green Revolution with its high-yielding varieties succeeded in increasing rice production, that was made possible with considerable environmental

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cost. The use of chemical fertilizers and pesticides affected the character of traditional integrated farming systems and compromised the biodiversity that provided sustainability to local systems of paddy farming. In Sri Lanka, there is an increasing incidence of suicide by farmers who find their situation without hope, and the dissatisfaction expressed by farmers over crop losses, indebtedness and other social pressures has become a matter of great concern for the political leadership of the country.

The Introduction of SRI in Sri Lanka

We have found that the System of Rice Intensification provides an alternative approach to rice production that addresses most of the problems that are being encountered by our farmers. Information on SRI first came in 1998 from Prof. Norman Uphoff who had been working in Madagascar but no action was taken until Mr. Joeli Barison from Madagascar visited Sri Lanka at a time when I was launching a program of desiltation and rehabilitation for minor reservoirs in the dry zone district where I come from. Our aim was to increase the cropping intensity of the minor irrigation systems by bringing back their water-holding capacity to original levels along with several other complementary interventions.

In January 2000, Barison talked with farmers, researchers and officials about SRI, and I arranged for him to explain this system on national television. As a farmer myself, I could grasp the basic principles behind SRI and had no difficulty in becoming convinced about its potential to make significant changes in our rice fields.

Having brought SRI to the attention of the top management, agricultural scientists, and rice researchers of our Ministry of Agriculture, we formed a small team to present information on SRI to groups of farmers, comparing these new practices with those that are presently being used by farmers. Farmers listened carefully, raising questions about root growth, tillering, nutrient absorption, water use, use of the mechanical weeder, and the practical application of a low-input, high-return model. They wondered about the adaptability of the method under the different dry zone and wet zone conditions in our country. They were inquisitive about how farmers in Madagascar did their land preparation, made and applied compost fertilizer, and managed water sparingly.

The first time that farmers practiced SRI on their own farm fields was to test its viability in the yala (dry) season in 2000. Staff of the Ambepussa Agriculture

Training Center of the Western Provincial Council did trials to compare SRI with the conventional system. In these efforts it was clearly demonstrated that yields can be doubled by using SRI.

Personal Experience

I have my own rice field, a little more than two acres, located in Kurunegala District adjoining the national government's main rice research station at Batalagoda. I have practiced SRI on my field there for four seasons now using seeds of various different varieties, traditional and improved, to see which will respond best to SRI practices.

The highest yield reached so far was 17 t/ha, with BG 358, a variety developed by Sri Lankan rice researchers on the adjoining station. I have gotten some equally impressive yields, exceeding 8 t/ha and as high as 13 t/ha, with local varieties such as *Rathbel* and *Pachchaiperumal*. These are usually much lower yielding, just 2 t/ha or so. But these traditional varieties produce a very tasty, high quality rice for which the market price is two to three times higher than for standard rice and for which there is export potential. Reaching 8 tons or more is thus very profitable. These high yields are supported in part by my using the Effective Micro-organism technology (EM) on my field which contributes to better soil microbial dynamics.

Taking Advantage of the Opportunities from SRI

These achievements compelled us to present information on SRI to a wider rice-farming community countrywide, allowing farmers to practice it by themselves in small plots to test its potentials. The farmer response has been impressive with greater yields reported by farmers from 18 districts who generally have gotten a doubling of the yield they are used to getting.

These yields were obtained with less water, less seed, less chemical fertilizer, and less cost of production per kilogram by farmers who voluntarily tested SRI in their farm plots. Among SRI users, we find people of many different income and educational levels and different social standing, including many poor farmers having only small plots of land, farmers with moderate income, some agricultural scientists, and a few administrators, businessmen and political leaders who practice it with their own convictions.

The Department of Agriculture's Rice Research Institute at Batalagoda is now testing SRI before it makes its formal recommendation. The Department is

the formal organization accountable for official approval of new practices and technologies, so it is usual practice for researchers to test any innovation on their research station and subsequently on farmers' fields before issuing a formal recommendation.

Since SRI is completely environmental friendly with no requirement of imported seed or increased inputs, and since SRI is based on practices that farmers are already accustomed to, we expect that there will soon be an adequate body of knowledge and experience generated by farmers to predict that when SRI is more widely utilized, the people and the country will benefit from this. There is no reason to be worried about at least trying it out.

There are various other reasons to promote SRI that are important to policy-makers. Our government is anxious to serve better the economic interests of rice producers.

- One farmer who two years ago led a group of fellow farmers in a much-publicized fast against the government to protest the low prices that farmers were receiving is now playing a leading role in promoting SRI, having become a SRI farmer himself and getting very attractive yields. The method gives farmers a more positive attitude toward their opportunities and profession.
- In the Western Province where paddy cultivation has been declining due to high labor costs and very low yields, we are seeing farmers taking up SRI in increasing numbers, season by season, because this new method lowers their costs of production. In some cases, paddy land that was previously abandoned because farmers could not have any profit growing rice is being cultivated again using SRI methods in expectation that paddy can once again become profitable.

- A group of Sri Lankan farmers practicing SRI has recently started to export some high-quality traditional rice varieties to Europe as "eco-rice." These receive a premium price as organic produce from consumers since no pesticides have been used, and their yield is very favorable using SRI methods.

Although Sri Lanka is nearing self-sufficiency in rice, still there is need to import a substantial quantity of rice, 300,000 metric tons, about one-seventh of our consumption, to fill the gap between production and requirement. There is also the need to prudently use the available land and water resources by tapping the maximum potential where such utilization is profitable. The farmers presently cultivating paddy on nearly 750,000 hectares in my country are of many different categories of land assets and capabilities so there will surely be a large number for whom SRI is attractive and practical.

The contribution of this conference to our greater understanding of SRI will be of utmost importance to enlighten many others who would need such information for action. We are very much interested to hear from professionals from other countries about their experience in applying SRI in their environments, the problems encountered, and the opportunities ahead.

If these initial efforts can grow to such magnitudes that they increase productivity, quantity and quality of the staple food for millions of people, this will go a long way toward reducing hunger, poverty and social unrest in our countries. I wish the conference all success in producing knowledge and insights for directions in promoting the System of Rice Intensification for greater benefits to all.