

Norman Uphoff



Norman Uphoff has been director of the Cornell International Institute for Food, Agriculture and Development (CIIFAD) since 1990 and a faculty member in the Department of Government at Cornell University since 1970. For most of the years between 1970 and 1990, he served as chair of the Rural Development Committee in Cornell's Center for International Studies, working on various aspects of participatory rural development (farmer organization, decentralization, social capital, etc.) When CIIFAD was established in 1990 to advance both knowledge and practice for sustainable agricultural and rural development, Uphoff's new responsibilities reoriented him more toward problems of sustainable development and agroecology.

He first learned about the System of Rice Intensification (SRI), developed in Madagascar in the early 1980s by Fr. Henri de Laulanié, SJ, in 1993. It was not until 1997 that he was willing to give much credence to this system -- which was raising farmers' irrigated rice yields, using only about half as much water as usual, from about 2 tons/hectare to an average of 8 t/ha -- without requiring the use of new seeds or chemical fertilizers. A few farmers who used the methods most skillfully were able to get 12 to 16 t/ha.

It took Uphoff several years of working with Malagasy students doing thesis research on SRI (on farmers' fields) and much reading into the crop and soil science literature to understand better the agronomic features of the system and Fr. de Laulanié's insightful explanations for the system's success. It also took several years to get colleagues in other countries to try out this very unusual methodology. In 1999, Nanjing Agricultural University in China reported results of 9.2-10.5 t/ha with SRI, and in the 1999-2000 season, the Agency for Agricultural Research and Development in Indonesia, one of the major rice institutes in the world, got 6.5 t/ha with these methods, several tons per hectare higher than with conventional methods. The next season the Agency's SRI yield reached 9.5 t/ha. Since then, after three years of evaluation, AARD has made SRI part of its new national strategy for Integrated Crop and Resource Management. In the past three years, SRI evaluation has spread to at least 15 countries beyond Madagascar.

There are several challenges with SRI: **to understand how such remarkable increases in yield are possible**, some of them beyond what has been considered to be "the biological ceiling" for rice production; **to disseminate knowledge of this system** to smallholder farmers around the world in terms that they can utilize; and **to integrate the methods into farming systems**, since households must consider production needs and activities beyond that of their basic staple food.

By raising the productivity of land, labor, water and capital, SRI opens up new possibilities for diversifying smallholder production systems, meeting staple needs with less land, labor, water and capital. This approach is already being explored in Cambodia and Sri Lanka. Uphoff has been trying to anchor SRI in the context of agroecological theory and practice, as seen in his contribution on SRI in the book he edited, *Agroecological Innovations: Increasing Food Production with Participatory Development* (Earthscan, 2002). This book came out of an international conference that Uphoff organized with Miguel Altieri and held at the Rockefeller Center in Bellagio, Italy, in April 1999. An article on SRI written with two CGIAR scientists, Willem Stoop and Amir Kassam, was published in *Agricultural Systems* in January 2002. The SRI home page (<http://ciifad.cornell.edu/sri/>) makes available the proceedings of an international conference on SRI held in China in April 2002 giving results and analysis from 15 countries.

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