

## Oxfam America: Learning from the System of Rice Intensification in Northern Vietnam | GINA E. CASTILLO, MINH NGUYET LE, AND KIMBERLY PFEIFER

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**D**espite Vietnam's remarkable success in reducing poverty from almost 60 percent of the population in 1993 to 14 percent in 2008, 18 million Vietnamese still live on less than US\$1.25 a day. Vietnam supplies a fifth of the rice consumed worldwide, and yet millions of rice farmers grow barely enough for subsistence. Over 9 million farmers in Vietnam own less than half a hectare of paddy land, generally fragmented into 6–10 smaller plots. Some 90 percent of these farmers live in the country's northern region. They are highly vulnerable to external shocks, especially climate change and the high and volatile price of food and agricultural inputs. Meanwhile, extension services often overlook their needs and rely on prescriptive, top-down approaches that have failed to invest in their ongoing adaptive capacity.

Oxfam America (Oxfam) has been working with civil society partners and the government of Vietnam to make the System of Rice Intensification (SRI) available to smallholder rice producers across Northern Vietnam at a scale hitherto unreached. Unlike many conventional rice-farming practices, SRI encourages farmers to optimize the performance of the individual rice plant rather than maximize inputs. It is a principles-based system and relies on a menu of husbandry practices, each of which delivers increased yields, often with fewer input requirements than established practices.

Oxfam encouraged farmers to experiment with transplanting seedlings younger than one month; transplanting individual seedlings rather than clumps of three or more; spacing plants widely and regularly rather than densely and irregularly; and keeping soils moist rather than inundated. The introduction of SRI is flexible. Farmers may adopt it at any scale and with any combination of the husbandry practices that SRI comprises, using the same seeds and fertilizers already available to them.

### A design for scale

From the outset, the program aspired to move beyond local implementation and reach national scale and impact not only SRI implementation but the capacity of farming communities and extension services. At the national level, it had technical and financial support from Oxfam and the government's Plant Protection Department (PPD). At the local level, the program has coordinated with mass organizations, local government, and service providers to work together with farmers. At the provincial level, the PPD advocated for resources from the provincial government for field-level implementation.

The program design involved three interlinked phases:

1. Local testing and confirmation of the potential of SRI. SRI was tested in a range of local contexts to assess crop performance, profitability, and scope for local adaptation. The aim was twofold: (i) to build an evidence base confirming the potential of SRI and (ii) to build local experience in extension approaches that enable farmers and local technicians to

adapt SRI principles and learn how to maximize benefits for themselves.

2. Expanding upon experience and the evidence base to build a critical mass. Oxfam and PPD focused on refining the SRI technical and extension materials in order to make these widely available to technicians and agencies. A tiered extension model was developed with intensive farmer field schools (FFSs) at one end of the spectrum and extensive farmer-to-farmer extension approaches at the other. This allowed the program to build a critical mass of experienced practitioners at both farmer and technician levels.
3. Aligning with the government and mobilizing resources. As the first two phases progressed, the program increasingly prioritized documentation of field results to engage researchers and policymakers. The program was able to align with and influence various policy mandates and leverage government resources to invest in the program. Advocacy has played an important role in the expansion of SRI: to gain support, leverage resources, and to foster greater dialogue between farmers and policymakers.

### A growing reach: Results to date

A successful pilot in Dai Nghia commune in 2006 marked the launch of the SRI extension partnership for Oxfam and the PPD. Starting from 3,450 farmers nationwide who were applying SRI on 70 hectares of paddy land, Oxfam invested in six provinces. In 2011, the PPD reported that by the end of the spring crop, 1,070,384 farmers had applied SRI principles on 185,065 hectares across 22 provinces, accounting for 6 percent of the nation's paddy areas and 11 percent of Vietnam's rice farmers.

Farmers have directly benefitted from adoption of SRI. On average, SRI farmers increase their yields by 9 to 15 percent while reducing use of inputs compared to conventional practice: 70–75 percent less seed, 20–25 percent less nitrogen fertilizer, and 33 percent less water. This has resulted in additional income of US\$95–\$260 per hectare per crop season. Farmers report positive changes to the environment and their health as a result of less use of pesticides, herbicides, and chemical fertilizers.

Additionally, monitoring shows that as farmers gain confidence in SRI they are applying it to a greater portion of their paddy land. The average application per farmer increased from 0.01 hectare in 2003 to 0.26 hectare in 2008 and to 0.31 hectare in 2010.

Farmer participation in design and delivery of the program fostered buy-in, helped to garner support for horizontal scaling, and facilitated functional expansion and longer-term systemic changes. The extension services are working in a more participatory manner and are increasingly able to integrate farmers' challenges and demands. The evidence-based, open-ended learning approaches are well received by both farmers and local technicians. Farmers'

own findings and their messages are powerful in vertical scaling and leveraging political support.

The program prioritized working with women farmers, who make up 70 percent of participants in FFSs. Learning about SRI has given women greater confidence both at home and in public. Also, women farmers have proven to be better at training others than have men. After participating in an FFS, each woman helped, on average, five to eight other farmers adopt SRI principles, while every FFS male participant helped one to three other farmers. Given the growing number of SRI participants and diverse adoption at the provincial level, a rigorous impact assessment is needed.

Another achievement of the program has been its success in leveraging support and resources from the government. At the start of 2011, the government allocated US\$383,000 in the six program provinces to support SRI and other low-input, low-carbon agricultural methods. This was one-third more than Oxfam's contribution. The recognition of SRI as a technological advancement at the central government level and integration with other rural development policy initiatives have been critical in creating space for provincial-level partners to access resources.

### The challenge of maintaining political and learning spaces

As SRI gained greater support, there was a risk that proponents would lapse into presenting it as a quick set of prescriptive steps: fixed seedling age, fixed spacing, fixed fertilizer regimes, and fixed water regimes. While this approach will give some positive outcomes, it generally limits farmers' own learning and the program's long-term goals. To manage this risk, the program has worked hard to ensure that SRI remains principle based rather than prescriptive. It emphasizes farmer experimentation, which takes more time and requires genuine investments in building the capacity of farmers and the ability of extension service providers to keep pace with the plans of individual farmers.

By using this approach, the program also faced the challenge of integrating empowerment processes aimed at broader social change. The implementation of activities related to gender equality,

for example, have been one-off activities. Oxfam and partners are experimenting with different modes of collaboration at the district and commune levels—with cooperatives, farmers unions, extension centers, and so forth—to help address these issues.

Finally, the redefinition of central-local government authority relations under decentralization processes has created both opportunities and constraints for the scaling up of SRI. The Ministry of Agriculture and Rural Development (MARD) is responsible for agriculture policy and for achieving the agriculture targets set out in the government's five-year plan. It has approved SRI as a technological advance in rice production and recommended its entities apply for participation. Decentralization enables decisionmaking at the provincial level, which leads to uneven adoption of recommendations. Different views exist within MARD and its provincial counterparts on the efficiency in SRI adoption. Provincial support depends heavily on the connections and advocacy capacity of provincial staff. At the national level, Oxfam and PPD are advocating with policymakers to gain their endorsement and address policy contradictions. Documentation of program results and organizing visits to hear directly from farmers are important tools to get buy-in from different policymakers.

### Conclusion

Having a lasting impact on agriculture on a large scale is urgent and necessary. This example from PPD and Oxfam illustrates that scaling up warrants a shift in design beyond discrete projects to a longer-term investment in partnership. As the program continues to move ahead in Vietnam, efforts to furthering its reach toward 2 million farmers will continue, but over time local actors, rather than Oxfam, will increasingly have to drive the scaling-up processes, and the emphasis will have to remain on strengthening the capacity and voice of farmers.

**For further reading:** SRI-Rice ONLINE, <http://sri.ciifad.cornell.edu>.

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