Smart farmers with smart practices boosting yield & income: SRI in action in Lower Mekong Basin

Farmers from five provinces of Cambodia and Thailand have reported higher profit, almost double, for paddy grown with the System of Rice Intensification management practices. This was due to the higher yield coupled with reduced cost of seed, seedlings, and pesticides, and also due to the higher quality of the grain produced, commanding a higher market price. This was reported from 60 action research sites spread over 15 districts of five provinces, 3 in Cambodia: Kampot, Kampong Speu and Takeo, and 2 in Thailand, Uttaradit and Surin.

As a part of action-research, more than 120 sets of field experiments have been carried out last year. The experiments ranged from integration of SRI principles with farmers’ local practices to full demonstrations and assessments of SRI methodology. This result was reported at the provincial workshops, at the national workshop and recently at the Regional Review and Planning Workshop of the project held on 02-03 June 2015 at Siem Reap, Cambodia.

The project is being implemented in rainfed areas of Lower Mekong River Basin involving smallholder farmers and in partnership with the Food and Agriculture Organization of the United Nation, Oxfam America, SRI-Rice, Cornell University in USA, and University of Queensland in Australia along with lead government ministries and national universities and is working in tandem with the policies of the government ministries to support intensification of rice production in food insecure provinces using System of Rice Intensification (SRI) principle. Similar efforts are underway in Laos and Vietnam and will continue for next 3 years in all four countries.
Regional Review & Planning Workshop in Siem Reap, Cambodia

Progressive action research model and active dialogue among various stakeholders working at the local, national and regional level are prerequisite for wider adaptation and dissemination...

The first Regional Review and Planning workshop of the SRI-LMB was held in Siem Reap Cambodia from 02-03 June 2015. The workshop was organized by the Asian Institute of Technology (AIT) and hosted by the General Directorate of Agriculture (GDA), Ministry of Agriculture, Forestry and Fisheries (MAFF), Cambodia. The objectives of the workshop were to share the initial learning derived from 60 action research sites, jointly review project activities undertaken since 2013, and collect feedback from various stakeholders and feed into the next cycle of action research to strengthen the project actions.

Approximately 50 persons participated those included representation from GDA, MAFF, Cambodia; Department of Agriculture Extension and Cooperative (DAEC), MAF, Lao PDR; Ministry of Agriculture and Cooperatives (MoAC), Thailand, Rice Department, Thailand; Plant Protection Department (PPD), Ministry of Agriculture and Rural Development Vietnam; representation from Royal University of Agriculture Cambodia, Rajabhat University Thailand, Nabong College of Agriculture Laos along with the representatives of Food and Agriculture Organization of the United Nations, Oxfam America, SRI-Rice Cornell University and University of Reading UK, AIT and representative of the EU Delegation to Thailand.

The workshop had plenary and review and planning sessions. The plenary session included sharing of knowledge and experiences on SRI and agro ecological approach from Asia, Africa and beyond along with the sharing of learning from SRI-LMB on farmer’s participatory action research’s result compiled from 60 action research sites spread over 15 districts of five provinces of the lower Mekong river basin countries. The session also discussed action research model used for the implementation of FPAR, and findings of policy baseline research and framework for advocacy. The review and planning session discussed SWOT analysis of FPAR implementation in all four countries and also work plan for the year 2015 and onwards. The partner’s action in achieving the project objective was also reviewed and analyzed.

SRI-LMB through its regional collaborative action in 4 LMB countries is trying to gain an understanding on this through farmer’s participatory action research involving smallholder farmers (including women and landless), researchers, extension personnel, and development professionals along with staff of government ministries. As a part of initial set up, 120 sets of field experiments were conducted at 60 action research sites across the region, as reported in this issue.

The initial calculation of yields has showed 60% gain (5.03t/ha) with integrated SRI practices and 100% (6.41t/ha) with full SRI demonstration compared to baseline yield (3.14t/ha) in the region for the same farmers and same locales. The net profit achieved with SRI management was almost double, due to the higher yield coupled with reduced cost of seed, seedlings, and pesticides, and also due to the higher quality of the grain produced, commanding a higher market price.

This initial regional trend, which was further strengthened at all level and involving all. Finally, positive feedback received from ministries that included: project is in line with their government policy and the project activities are well planned and structured to address the concern of smallholder farmers.

The workshop noted and discussed the results of more than 120 field experiments at 60 action research sites. The FPAR results showed higher yield and profit with higher input productivity irrespective of biophysical variability and variability in training approach.

As a way forward, the workshop recommended to have progressive action research model, which is near to real-field situation, a model that can be replicable and sustainable in longer run. It was also suggested that SRI is knowledge intensive approach therefore for innovation, which is prerequisite for SRI adaptation, it demands active dialogue among various stakeholders working at the local, national and regional level. Communication is the key and it should be further strengthened at all level and involving all. Finally, positive feedback received from ministries that included: project is in line with their government policy and the project activities are well planned and structured to address the concern of smallholder farmers.

MESSAGE FROM TEAM LEADER (contd…)

Dr. Abha Mishra
National Review & Planning Workshops in Thailand & Cambodia

Economic profitability encourages farmers to adapt new techniques...

In addition, Dr. Phassakom Nuntapanich, Rajabhat University, discussed MEL research findings on the adoption pattern between FPAR and non-FPAR farmers. He presented remarkable results on yield and profit gain by FPAR farmers in both provinces. He recommended promoting "organic SRI" or "GAP-SRI" by linking project activities with similar government initiatives, which is ongoing in NE Thailand, particularly in Surin.

Mr. Warit Mingmolee, MoAC, Thailand discussed the agriculture intensification and climate change adaptation in the context of existing agriculture policies in Thailand. He added that MoAC has done several research on rice farming including SRI technique and also adaptation is very important so as to produce economically and remain profitable.

Reducing cost of production with higher yield & better quality of rice would encourage wider adaptation ...

Deputy Director General, Ms. Chan Phaloeun, GDA, MAFF inaugurated the workshop and extended full support of the Government to the project and its objective which is in line with the policies of the Royal Government of the Cambodia. She added that higher yield and net return from the SRI plots clearly demonstrate its relevance and expressed her concerns about reducing cost of production with better high quality rice production. She also noted the rapid decline in availability of the agriculture laborers in Cambodia.

Dr. Prabhat Kumar, Regional Coordinator, emphasized that despite very late rainfall during the FPARs in 2014 the yield and net return from FPARs were remarkable and clearly showed that SRI grown plant are better able to withstand drought and despite weather vagaries able to yield high compared to local practices while using less inputs on all counts (seed, water, water, chemicals). He suggested the provincial coordinators and national team for better and timely coordination and backstopping support for a better working and results in FPAR 2015.

The overall work plan for 2015 FPARs were presented by country and provincial coordinators starting mid July 2015 as wet season (a total of 72 FPAR sites would be established). It was agreed that one large SRI plot will be established at each site. The workshop concluded with a firm plan and pathway to take the objective of the project for the second cycle of the FPARs. Mrs. Mel Chantevy has recently joined as new provincial coordinator for the Takeo province. In addition, to the FPARs, several specific activities related to women and landless farmers were presented which would be deliberated and finalized in consultation with all partners prior to implementation.
Provincial Workshops in Thailand & Cambodia

THAILAND

“Sufficiency Economy” policy is the best policy to encourage farmers to produce high quality and cost effective rice using SRI method...

A two-day two workshops, one for each province, were organized, one by Provincial Non-formal and Informal Office of Surin (NFE) and another by Vocational Training and Development Center for Thai People along the Border Areas (VTDC), Uttaradit, and Ministry of Education (MoE) in cooperation with ACISAI Center, AIT.

The Provincial workshop for Thailand was inaugurated by Mrs. Orasa Supharee, Director, NFE, Tha Tum district in Surin province and Mr. Ars Phonhet, Director, VTDC Center in Uttaradit province.

Both emphasized on the nation’s “Sufficiency Economy” policy to encourage farmers to produce high quality and cost effective rice using SRI method. The workshop reported that all experiments where one or more SRI practices were applied resulted in higher yield and consequently gave higher net return compared to the yield level reported in baseline and background paper submitted by MoAC at the time of the project’s inception workshop. In addition, the MEL survey results from FPAR 2014 presented that farmers adopting SRI practices were harvesting more with ultimate higher net return.

As a recommendation for next FPAR, farmers requested to bring in and share information and idea on labour cost saving and cost effective soil improvement techniques. In addition, they recommended to bring more awareness about the project and suggested to use local folk songs and media to disseminate project information at wider scale.

CAMBODIA

Higher yield & profit and close cooperation with local authority and good relationship with farmers are important...

Three Provincial workshops in Cambodia were organized in Angkor Agricultural Farmer Training and Research Center, Kampong Speu province for FPAR participants from three selected provinces (Kampot, Kampong Speu, and Takeo) where FPARs were conducted. All three workshop was inaugurated by Mr. Kong Kea, Country Coordinator for Cambodia, emphasized the importance and need of such effective provincial meeting to share results and challenges, improve weaknesses, and alleviate quality of upcoming FPAR.

So far, 36 FPARs (12 in each province) have been conducted in wet season 2014, which have significantly provided farmer a great opportunity to make their rice production system more efficient and smart using SRI principles.

All experiments that revolved around SRI principles performed better than conventional management practices and provided higher yield and higher net return (more than 50%) compared to baseline scenario established prior to implementation of FPARs.

Further to that Ms. Kaneka Keo shared some experience from ‘Saving for Change’ Programme that Oxfam has been implementing since 2005 in Cambodia. Mr. Chung Sophal, National Researcher, presented MEL findings for discussion and finalization involving farmers and other stakeholders. In conclusion, it was suggested that close cooperation with local authority and good relationship with farmers are important for successful implementation of FPAR.
Central Farmer’s Participatory Action Research completed in Lao PDR & Vietnam

The season-long farmer’s training, known as Central Farmer’s Participatory Action Research (CFPAR) was successfully completed in Vientiane province, Lao PDR and in Bac Giang & Ha Tinh provinces, Vietnam. The CFPARs were implemented by the Department of Agriculture Extension and Cooperative (DAEC) of Ministry of Agriculture and Forestry (MAF) in Lao PDR, and in Vietnam, it was implemented by the Plant Protection Department (PPD) of Ministry of Agriculture and Rural Development (MARD).

Mr. Banpot Saniosiang, one of the Smart Farmer from Srikhoraphum district, Surin province is very happy to share his SRI journey with the results he got after the successful completion of FPAR wet season 2014. He adapted SRI management for RD15 (Ka Kho 15) rice variety with the spacing of 25 x 25 cm using younger and single seedling transplanting method. The SRI method helped him to achieve an average of 330 productive tiller/sq.m with an average 88% fertile panicles which ultimately resulted to enormous yield of 8.30 t/ha where the average yield in his locality was nearly about 3.44 t/ha. The average net return from his field ranged to 3115 US$/ha. Apart from the high net return, his other benefit includes high quality of grain with less usage of resources (water, seed, fertilizer and labour) and zero lodging of the crops.

He is very delightful with this achievement. He received best yield award for the year 2014. At the National Review and Planning Workshop in Thailand, he expressed gratitude to the project and expressed his enthusiasm to follow and spread the knowledge of SRI technique to other farmers of his village. In his short speech, he described how farmers of his community turned from critic to admirer of the SRI and it was only possible when they participated and observed enormous yield difference between conventional and SRI technique of rice production.

The training involved rice farmers, districts, provincial and national trainers and extension officers with technical backstopping support from AIT and FAO. The training objective was to build capacity of farmers and local trainers so that they can lead the farmers participatory action research for the development of location specific rice production technologies under the guiding principles of SRI by setting experiments, documenting information and reporting key results and challenges concerning crop production at the community level. The CFPAR also discussed, prepared and finalized work plan for the FPAR, which will be implemented in wet season 2015 in both countries.

FARMER IN FOCUS

“Farmer’s perception turning from criticizers to admirers due to enormous difference of yield between conventional and rice grown by SRI techniques” says Mr. Banpot Saniosiang, a smart farmer from Surin.

Mr. Banpot Saniosiang, one of the Smart Farmer from Srikhoraphum district, Surin province is very happy to share his SRI journey with the results he got after the successful completion of FPAR wet season 2014. He adapted SRI management for RD15 (Ka Kho 15) rice variety with the spacing of 25 x 25 cm using younger and single seedling transplanting method. The SRI method helped him to achieve an average of 330 productive tiller/sq.m with an average 88% fertile panicles which ultimately resulted to enormous yield of 8.30 t/ha where the average yield in his locality was nearly about 3.44 t/ha. The average net return from his field ranged to 3115 US$/ha. Apart from the high net return, his other benefit includes high quality of grain with less usage of resources (water, seed, fertilizer and labour) and zero lodging of the crops.

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SRI-grown rice plant provided robust resilience against drought

Cambodia witnessed one of the worst early season drought that continued until September 2014. Scores of farmers planted rice seeds 2-3 times only to wither in absence of rain. The planting was delayed, seed source was exhausted and worries for a total failed season loomed large. However farmers raising crops using SRI principles were able to establish crop with little water and the plant not only survived the ordeal but also provided a higher yield levels of 4.6 t/ha compared to the reported baseline yield level of 2.85 t/ha.
Collaboration with the Big Plot Project, MoAC, Thailand

**Big Plot (BP) project** is an initiative of Ministry of Agriculture and Cooperative (MoAC), Royal Government of Thailand, aiming to produce high quality rice both for seed and for organic export market through consolidating small farms and developing and/or strengthening farmer’s network. The Rice Seed Center and Rice Research Station, Surin are providing the local leadership to this effort. Currently, the initiative is operational in three NE Thailand provinces: Surin, Sisaket and Roi et. The representative of rice seed and rice research center participated in the LMU/provincial workshop and it was agreed that SRI-LMB and the BP initiatives, both share similar objectives, would explore the ways of cooperation. Followed to this, a workshop was conducted in Tha Tum, Surin and detailed discussion were held on working modalities of the BP initiative and also that of SRI-LMB. A joint plan of collaboration was developed to set up the SRI demonstrations at selected key locations of the BP project to create learning opportunities for the farmers. SRI-LMB has started collaborating with BP project at 12 locations in Sisaket Province involving 12 villages with village heads as lead smart farmer.

Generally, three types of plant establishment is being followed at these 12 sites:

a) Line sowing using Tractor mounted machine (SRI Principles followed are wider spacing of row to row at 25 x 25 cm, Low seed rate of 40-50 Kg seed/ ha, use of organic manures (6.25 tons/ha)

b) Transplanting (SRI Principle followed are younger seedling (2-3 leaf stage), one-two seedlings transplanting per hill, wider spacing 25 x 25 cm, use of organic manure at the rate of 6.25 tons/ha.

c) SRI Parachute (SRI principle followed are younger seedling, low plant density, use of organic manure (6.25 tons/ha).

The SRI LMB would continue to provide backstopping and training to the group to better adapt SRI principles for the local needs and aspirations to add to the overall objectives of this MoAC project which directly contributes to the HM the King’s Sufficiency Economy philosophy.

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**ACISAI’s third Steering Committee Meeting**

On 30th March 2015, the Asian Center of Innovation for Sustainable Agriculture Intensification (ACISAI) conducted a follow up meeting in connection to the second Steering Committee (SC) meeting held last year (Dec 2014) under the chairmanship of Dr. Anil Kumar Anal. The meeting was attended by all members and Co-Directors of the ACISAI Center (Dr. Prabhat Kumar & Dr. Abha Mishra). The meetings reviewed major activities completed in the year 2014. The major action plans discussed for the year 2015 were: finalization of professional master degree programme on Sustainable Agriculture Intensification, new proposal development, student research support, joint manuscript/discussion paper development and schedule of regular meeting.

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SRI-LMB Newsletter is published bi-annually by SRI-LMB Publications Unit. We welcome your input, preferably in English. The deadline for submissions is on 30 May for June issue and 30 November for December issue. We reserve the right to edit all contributions.

Please send inputs at srilmb@ait.asia and cc to Dr. Abha Mishra, Project Manager-SRI-LMB (abhamishra@ait.asia).

Website: www.sri-lmb.ait.asia

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