

Malaysia Report - Mechanisation for SRI

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The engineering unit of the state department of agriculture are actively coming out with small rotary weeding machines. Department of Agriculture is organizing a SRI Mechanization Seminar on the 22 Dec, 2011 and will invite the SRI community to participate. A few papers will be presented by officials, and

will feature experience sharing by farmers. A SRI-related machinery exhibition will also be held, plus field demonstrations using the various weeding machines.

At the same time, Pak Tam and I are working with a couple of innovative farmers to come out with motorized rotary weeders using their rotary cultivator and the small transplanting tractor. Although the progress is not as fast as we hope, but we are definitely pushing forward with some funding from MBI. One farmer use a 5-hp mini tractor to get a 5-row weeding machine.



Another farmer who has mechanical engineering experience working for a private company has come up with a 6-row rotary weeding implement that is pulled behind a transplanter tractor. We are elated because with these machines, we know that there will be entrepreneurs interested in fabricating them and enabling them to offer weeding services to farmers. At present, farmers with transplanted crop are already asking for their field to be weeded/aerated after telling them of the possibility of increasing their yields through weeding/aerating their fields. We are looking forward to more machines being produced by farmers themselves, and we are looking for interested

entrepreneurs.

Straw-Incorporation



We are making good progress in getting farmers to be interested to incorporate fresh straw into the soil immediately after harvesting.

At present, there are 10 adjoining plots covering 12 hectares being put to use for this demonstration. The state department of agriculture uses a boom-sprayer to spray the solution containing the microbes, and then rotovate the straw into the soil with a tractor.

Interestingly, about 200 neighboring plots are also incorporating their straw back into the soil. Some farmers use microbes while some did not. Suddenly, the demand for the decomposing microbes rises and we are training as many farmers to get their microbes using boiled rice placed under mature bamboo clumps, that is using the natural farming principles. We realized later that the rise in demand was initiated by a tractor service provider who saw the potential of providing another value-added service to his clients. We are quite happy to see it happening as this is providing the impetus needed to drive more farmers to incorporate straw into the soil rather than just burn the straw as was usually done.

Conclusion

Both of us have been busy on the ground. We needed to make the staff of the state department of agriculture to be at the same wavelength as us in wanting to see positive changes in the fields. And that's not easy. But with patient persistence, we have been warmly accepted by most of them. This is a picture of some of them during a visit to the straw-incorporation demonstration plot (pic below). They have come a long way from being weary of having to bear added burden to their job, to looking forward to both of us coming to help them on the ground



We hope to create solid a foundation for SRI to be taken up by the farmers in Selangor. At present there is only one farmer group that is producing the biofertilizers and biopesticides. We plan to have seven more groups to cover the total of 19,000 hectares. At present we encourage the farmers to use the organic concoctions to replace chemical pesticides in their existing crop. About two hundred farmers are already using the concoctions in their fields and reporting considerable cost savings by not needing to buy as many types of pesticides as before.

At the same time, we encourage farmers to aerate their machine-transplanted padi fields as a means to increase their yields. In transplanted padi, the plants show increase in

numbers of tillers after weeding/aerating activity is done. We hope there will be demands for the weeding/aerating services. This will encourage some mechanically skilled individuals in the village to improvise, and be able to provide the weeding/aerating services.

Eventually, we hope to have a transplanting machine that can plant single-seedlings with suitable spacing for SRI. We are very confident that once this machine is realized, SRI will be practised by many farmers in the state. SRI will not replace conventional planting for a long while, but if we can prove that changing to SRI means more income from cost savings and yield increase, moving to 100% SRI will be easier.

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