SRI Roller Planting Marker

(https://www.echocommunity.org/en/articles/176/edit)

reprinted with permission from the Natural Agriculture Journal, March 2014 translated by the ECHO Asia Impact Center

By: Preeyachaya Klaythuan

Published: 2014-06-15

From: ECHO Asia Notes (/en/resources/d0eaf359-b4a4-43a1-801b-ab1320c1ba76) | AN Issue #21 (/en/resources/aad31836-a33c-42f6-8e6c-6163b7890d87)

an-issue-21.pdf (https://www.echocommunity.org/en/resources/aad31836-a33c-42f6-8e6c-6163b7890d87/download)

Targeting a Better Rice Farming Future

The System of Rice Intensification (SRI) is becoming more popular in Thailand. Both new and experienced farmers are excited to learn about improving rice systems rather than just focusing on high yields.

The upper central region of Thailand, especially in Nakorn Sawan, has rich soil and at stretches of land along the river. This area has good conditions to cultivate rice, especially to produce rice for seed. Most of the rice seed used in central Thailand is from this region.

Current SRI Trends in Thai- land: Growing Popularity and Commercial Use of SRI

If SRI is practiced on 1 to 5 rai (0.16 – 0.8 acres), the work can be done by family members or by shared labor between neighbors, a common practice. However, for farmers producing pure-bred rice seed or commercial seed with SRI, the detail of the work is very demanding. If farmers don't possess adequate skill, they may not produce quality pure-bred seed, which results in lost time and opportunity.

Wanpen Channarod *[Ed: Wanpen Channarod is also mentioned in Boonsong's re ection]* is a farmer from Thamai, Chomsaeng Nakorn Sawan. She cultivates rice on sixteen rai (7.2 acres), producing single and multiple seedling clumps for rice paddy planting. In addition to using SRI methods to produce these seeds, she also made a roller marking tool that is now used for commercial SRI production in Nakorn Sawan province and surrounding areas.

[Ed: The roller marking tool makes it easier to plant rice in straighter rows, increasing ef cient use of land space and reducing damage to plants when the plot is weeded with a mechanical weeder.]

"I had already practiced SRI for many years when one day the company asked me to plant SRI rice for seed on 60 rai (24 acres)," says Wanpen, "with the conditions that the rice plants should be planted in rows and equally spaced. At first, I did not accept the contract. I thought about how to plant SRI seedlings in even rows. I could not eat and sleep, I thought about it day and night. Finally, the design came to me. My brother, who is a technician, built it and tried it on the job. With 60 rai (24 acres) in the contract, I knew it would make a big difference, but would also be an invaluable experience."

Making Ordered Lines in SRI Fields

Creating the first prototype involved much trial and error. From the beginning, Wanpen continually modified the tool, in order to address problems that arose, improve convenience, and increase speed and ease of use. At the same time, she was still completing the work according to the contract with her customer.

After that first contract, she continued to use the roller marking tool, together with the traditional rope technique to define plant spacing. *[Ed: Traditionally, with SRI, rice has been spaced using a rope with knots tied into it, stretched across a field; the knots show where plants should be placed.]* However, the tool needed modification because the rolling metal structure was not strong enough. She tried to build it with PVC, but it was still not quite right. With the PVC addition to the model, she

tried to make a hole at the cross bar so that the operator could see where the tool was making marks in the mud more clearly, but the machine was still too heavy and it would sink into the mud. It required a lot of energy to make the tool roll, which was a waste of both time and strength. Finally the current model with its steel bar structure was developed.


(/resources/c8682874-aac2-47cf-989a-cd70ca306b1d)
Demonstrating the roller planting marker and SRI method in Nakorn Sawan.

Wanpen's Roller Planting Marker Development Model

Wanpen's roller planting marker was devel- oped from her experience. When a problem occurred, she would alter and develop the tool according to the problem and rice variety.

Wanpen's tool was designed to be light- weight, easy to handle and convenient to use. The handle was designed so that the tool can be pulled. The tool makes parallel and perpendicular lines to mark the planting locations, optimizing space between rows so that the rice is easily organized in lines without using too much energy.


(/resources/38911657-3dbb-42d0-9540-513166f295e3)
Demonstrating the roller planting marker and SRI method in Nakorn Sawan.

Measuring Space According to Rice Species and Tillering

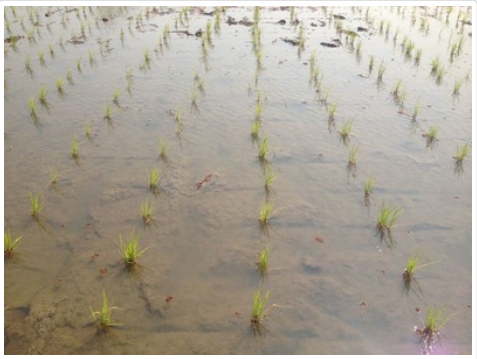

(/resources/9e929f7b-f1ba-4d4b-9525-64f8f81d781d)
Farmers demonstrate the roller planting marker and SRI method in Nakorn Sawan.

Because Wanpen grows SRI rice for commercial use, she needs to have several roller planting marker tools with different-sized wheels. Which one she uses depends on the tillering habits of the rice variety she intends to plant. Her roller marking tools are 30x30 cm., 16x30 cm., and 25x25 cm, depending upon the need. *[Ed: SRI rice is traditionally planted with 25X25 cm or wider spacing].*

Once marks have been made with the tool, rice seedlings can be planted. The fields must not be too wet, or the marks can easily be lost before rice seedlings are darted *[Ed: Darting is a form of rice planting—see associated article in this issue]*. After two weeks, the rice seedlings will be well established and growing in orderly rows.

Rice Established in Rows Makes Weed Control Easy

Planting in orderly rows for SRI will also help with weed control, which is important for paddy management. With traditional rice farming methods, weeds are difficult to manage. If farmers walk through traditional rice paddies, they risk damaging the plants. Because SRI is planted in consistently spaced rows, farmers can weed the paddy with very little damage to the rice.


(/resources/a355f620-d891-4b1b-95ae-7de60602dd1f)


(/resources/a4f6e12f-9d3f-47ab-9c27-8de915089e18)

Two Strong Farmers: Mother and Daughter Work Together

Even though Wanpen has a team to plant her commercial SRI paddies, her daughter Pijarinee Ruksri (Aae), a recent university graduate, also produces rice seedlings for her mother.

The weekend farmer network [*Ed: The "weekend farmer network" is a concept mentioned in the SRI Tool Innovations article. It is the concept that many Thai farmers hold full time jobs but continue to farm on the weekends.]* has also created and developed the "single rice seed seeder," a tool made of double layers of acrylic. The upper layer has 434 holes, according to rice seed size. The bottom layer has identical holes, but overlaps with the upper one. The rice seeds are spread on the upper layer and shaken horizontally so that the rice seeds drop into the holes. The acrylic tray, with holes aligned, is placed on top of a prepared seedling tray. Remaining empty holes can be planted manually. This technique helps seed trays easily and efficiently (one minute per tray.)

Wanpen uses the area around her house as a rice seedling nursery. Some of the seedlings that she produces (either from seed brought by customers or from her own seed) are sold to farmers. Some are used as replacements in fields after initial rice establishment. Current favorite rice species amongst her customers include: 'Riceberry,' 'Hormnin,' 'Hormsukothai,' 'Hormlanna,' and 'Gorkhor 49.'

Permanent Links