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Exploring the 21st century's Rice Production

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## SRI Harvest Ceremony in West Nusa Tenggara, Indonesia

A SRI Harvest Ceremony was held on 5 April 2007 in West Nusa Tenggra province by invitation of the Governor. The total number of attendees was 300, including several senior government officials from Jakarta - Secretary General of the Ministry of Public Works (PU), 2 Directors from Directorate General of Water Resources, PU, and the Director of Land and Water Management, Ministry of Agriculture - as well as key officials from the province itself, consultants from the JBIC-loan funded DISIMP, and beneficiary farmers..

The ceremony was held at the Puyung SRI Research Station in Lombok, which was established in 2006 under the JBIC project DISIMP (Decentralized Irrigation System Improvement Project in Eastern Region of Indonesia). This SRI station is going to be used for the SRI research program by J-SRI members (University of Tokyo) from May 2007.

The ceremony was started with a choir singing the newly composed SRI Song, followed by speeches from the Head of Provincial PU, the DISIMP Team Leader, the Secretary General of PU, and lastly the Governor of the province. After the speeches, the ceremonial paddy harvesting was performed by the key officials, as shown in the photograph. Later, during the inspection of the SRI station by the guests, the SRI paddy yield was measured and announced as 9 t/ha. Interviews were given by the key officials for TV, newspapers and magazines.

With such strong interest from high level government officials, it is expected that the dissemination of SRI will be accelerated in Indonesia.

*(reported by Shuichi Sato, DISIMP - Nippon Koei)*


Photo: Paddy cutting ceremony (from left) Bupati, Governor, Secretary General of PU, Director of MOA, Team Leader DISIMP

***Speech by***

**Dr. Ir. Roestam Sjarief,**
**Secretary General of the Ministry of Public Works**

*< Translation from Indonesian >*

Dear Attendants,

To cover the shortfall against domestic rice demand, starting from this year the Government has declared that they intend to raise annual rice production to 2 million tons, with planned production increasing 5% per year until 2009. With population increasing by 1.5 percent per year, and the continuously increasing conversion of agricultural land year by year, national rice product must be continuously increased. There is no other way to cover the rice shortage than to increase production.

Some strategies were being taken into account by the government to achieve the said target, among others is by increasing the agricultural productivity, namely: preparation of excellent seeds, preparation of fertilizer and pesticide, improvement of agricultural infrastructure, management of the irrigation systems, handling of post harvest production, and also, from the technological point of view, the adoption of rice cultivation technologies which is to focus on 16 dependable provinces, including West Nusa Tenggara Province, one of the rice barns of Indonesia.

The West Nusa Tenggara Province has rendered valuable service in supporting the program of self sufficiency in food since 1984, and rice cultivation has become the people's culture. This also includes the application of rice cultivation by the SRI (System of Rice Intensification) system, the water saving paddy cultivation technique with higher yields at lower cost that has increased paddy productivity in support of the program to increase annual production to 2 million tons of rice.

Adoption of SRI paddy cultivation was started in dry season of 2002 in the Tiu Kulit irrigation area on Sumbawa. At the beginning it gave an increase of 29% higher than non SRI paddy, but in the testing during the following 5 planting seasons (2002-2004) it has produced an average of 8.34 t/ha, or 70% higher than non SRI paddy which was producing only 4.9 t/ha. Besides this, the use of irrigation water can be decreased by up to 35% of non SRI paddy water demands. The SRI paddy technology is applying 6 practical steps, namely: transplanting of young seedlings (10 days nursery, with double leaves); planting of single seedlings; wider planting spacing (30 cm x 30 cm); shallow irrigation water levels and intermittent wetting/drying during growth; use of organic fertilizer and; frequent weed clearing.

Increases in paddy productivity were also enjoyed by other regions applying the SRI paddy cultivation pattern, e.g. West Java, where total planting area of SRI in the planting season in 2006 was reaching 749 ha with average yield for SRI at 7.85 t/ha compared to conventional method yields of 6.25 t/ha. In the planting season of 2006/07, the total area of SRI was predicted to reach to 1,484 ha. All the participants of "SRI organic" were using organic fertilizer and pesticide without any chemical component at all.

The same success story with SRI paddy has been seen in West Sumatra Province where it is known as "single seed planting", and which has been able to increase rice production by 100% and increase farmers' incomes by 150%.

"SRI organic", referring to one of the basic concepts of SRI, has wider benefits but requires more advanced skills in the farm business, using organic fertilizers and pesticides to replace the chemical components. The same increases in yield will occur but at the same time there will be a continuous increase in the land fertility, enriching and improving the rice field land ecosystem and increasing the health condition of the people and the environment.

However, the SRI method is not a simple instrument giving improvements in the agricultural sector. The SRI method is a complex cultivation system that combines variables such as technical, managerial, social and agricultural skills, with other criteria needing to be fulfilled in the application, among others: the availability of the good irrigation infrastructure, efficient operation and maintenance, full farmer participation, together with good management and O&M of the irrigation system to keep it in good condition so that the farmers are willing to participate in water allocation and intermittent irrigation.

Strong and energetic farmers' associations are the key point for dynamic participation in the O&M of primary networks so that the complicated intermittent irrigation technique can be performed. It also requires a more sophisticated way of thinking by farmers with more expertise in the agricultural sector, more ready to accept innovation to achieve better production and extension of planting area. If this is not present, conservatism in agriculture will dominate and the traditional system will continue.

Thus, the extension of the SRI method should be carried out by giving priority to irrigation areas fulfilling the said factors. It would be better if the extension is from the farmers themselves, letting them increase implementation of SRI to the level they wish. It is necessary for farmers to be motivated to make adaptations according to local conditions.

Besides, it is necessary to emphasize that the dissemination of the SRI method is not limited to research and field trials, but by wider publicity and communication such as poster, scientific meetings at field level, and must cover all levels in regional government and central government having connection to paddy cultivation and production.

The success of SRI paddy cultivation in West Nusa Tenggara is inseparable from the support of the Governor of West Nusa Tenggara who is frequently holding meetings for the socialization of SRI paddy cultivation at the same time with socialization of irrigation management system and irrigation networks maintenance, and this is supported by the enthusiasm of WUA groups, as the battlefront of agricultural development, applying a spirit and persistence in the application of SRI paddy cultivation pattern to obtain a maximum harvest.

Finally, by saying Basmallah *(in the name of God)* let us carry out this big harvest, I hope God Almighty will always bless us with our needs to perform our duty and responsibility in the realization of the safe, peaceful, fair, democratic and prosperous Indonesia.

Wassalamu'alaikum Warrahmatullahi Wabarakatuh *(and Peace be with You)*.

***Speech by***

**Drs. H. Lalu Serinata,**

**the Governor of West Nusa Tenggara Province**

*< Translation from Indonesian >*


Invited Guests and Attendants,

We would like to thank God Almighty for today's blessing and grant, that today we can participate in the harvest ceremony of the SRI (System of Rice Intensification) method of water saving paddy cultivation in Puyung Village of Lombok Tengah District of the West Nusa Tenggara Province.

Food is a strategic commodity with an ever-increasing demand that has not been able to be satisfied from domestic production due the decreasing of supporting capacity of natural resources, in this case, land and water. The five strategic food commodities are rice, corn, soybean, sugar cane and cow meat.

To realize such food sustainability, factors such as conservation, management, and utilization of water resources by fair, efficient, transparent, accountable, and sustainable principles, together with freedom from flood inundation, are the preconditions that should be taken into account.

However, in this year's planting season, our region is confronted with a critical water shortage problem, resulting from the late and inadequate rainfall. This was one of the constraints on the productivity of agricultural land. I am appealing to all parties to deal with this critical water condition in an integrated manner.

In the framework of fulfilling the national food requirement, especially rice, the Government of West Nusa Tenggara has been conducting various efforts to increase regional rice production, among other things by development of new irrigation areas, by rehabilitation of irrigation systems, by improved operation and maintenance of irrigation systems, and by flood control in the agricultural land and settlement areas

Actually, in our region potential increases in rice field and dry land areas are still adequately available. The result of evaluation has shown that the opportunities for development and extension of the area under rice cultivation is still possible, especially in rice fields with only one crop in a year and by development of dry land for paddy cultivation. We hope that we can take these opportunities with our best efforts, and maximize the use of any suitable cultivation methods for development in our region, such as this SRI paddy method.

As we are all aware, at the moment our natural resources, especially water resources for the agricultural sector, are continuously decreasing. This was seen by the decline in our spring sources, from a total of 711 water springs in 2000, now reduced to 217, but at the moment, various efforts have been taken to rehabilitate forest areas, and this has lately increased to 278 water springs.

Considering that the total dependable water discharges in all irrigation areas in West Nusa Tenggara Province is continuously decreasing, beside the efforts in irrigation system rehabilitation, the regional government, at both provincial and kabupaten levels, is working together with the consultant of DISIMP (Nippon Koei Co., Ltd. and Associates), in conducting various innovations in water saving agricultural technologies.

One of the possible water saving techniques in the agricultural sector being conducted at the moment is the SRI method of paddy cultivation. Application of this method in some regions has been showing that it is not only has water saving advantages, but can also produce increases in production.

By this method, it is expected that West Nusa Tenggara Province in the future will have the capacity to increase production of rice from 1.5 million tons (milled dry un-hulled) in 2006 to 1.6 million tons in 2007. This prediction is based on the various advantages of SRI method paddy such as: water saving of around 30% to 40% compared with conventional cultivation; at a cheaper cost, because SRI requires only 4 kg of seeds/ha and a shorter growing time, needing only 110 days to harvesting; and with higher total productivity at 8 – 10 tons/ha.

Since West Nusa Tenggara Province has been identified as a main contributor to national rice production, with these various advantages, it would be better if the SRI method can be continuously applied in this region to achieve the target to increase national rice production.

I think that is all of the matters that I wish to say on this occasion. Finally, by saying Bismillahirahmannirahim (*in the Name of God*) I hereby formally declare the opening of the harvest ceremony of water saving paddy cultivation by SRI method in Kabupaten Lombok.

Wassalammu'alaikum Warrahmatullahi Wabarakatuh *(and peace be with you)*