

Efforts to improve rice quality both on-farm (**small holder**) and down the value chain

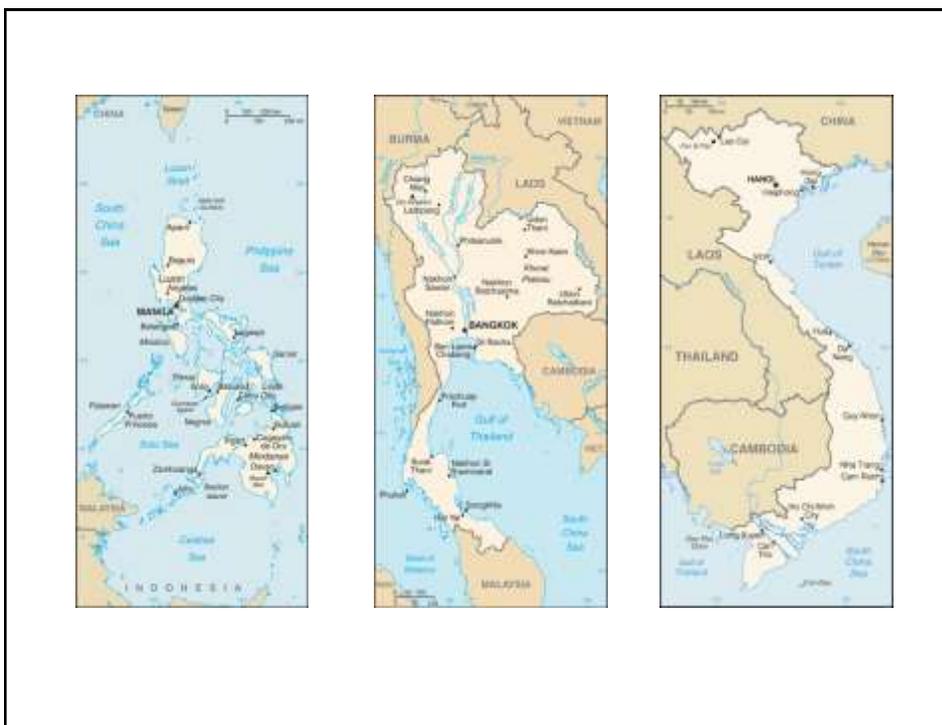
CARD Seminar via video conferencing
Seminar #2
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1. Summary of Rice farming in Thailand

Rice is the most important crop in Thailand
The rice production policy is to produce
for self-sufficiency and surplus for export.

The total cultivation area of rice production
is about 12.1 million hectares, 9.20 m ha
for the main rice crop and 1.44 m ha for
the second rice crop.





1. Summary of Rice farming in Thailand

Approximately 80% of rice area is under rainfed conditions where rice is usually grown only once a year in the wet season, that the monsoon rain is the single source of water supply for rice cultivation.

Another 20% of rice area is irrigated conditions where rice can be grown not only in the wet season but also in the dry season, because irrigation water supply is available. Major production comes from the wet season.

Rice varieties produced in Thailand

Variety	Area of production (million ha)	Amount (million t)	Consumption
White rice	6.3	16.2	Domes. 61.7% Export 38.3%
Hom mali rice	3.3	4.1	Domes. 43.9% Export 56.1%
Total	9.6	20.3	Domes. 58.1% Export 41.9%

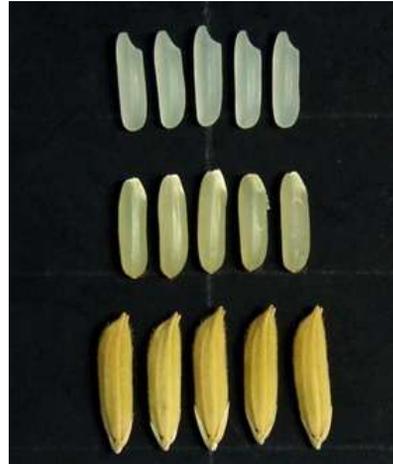
2. Rice varieties produced in Thailand

Mostly of Thai rice varieties divided by amylose content :

- ❖ Low amylose content ; Khao Dawk Mali 105 and Pathumthani 1
Native varieties
- ❖ High amylose content ; Chainat 1
Phitsanulok 2
Native varieties
- ❖ Glutinous rice ; RD6
Native varieties

2. Rice varieties produced in Thailand

- This is the typical of Thai rice, both Hom Mali rice and White rice.
- Hom Mali rice, main usage is table rice.
- White rice, main usage is table rice and rice product.



Appearance of milled and cooked rice in different amylose content



low

intermediate

high



2. Rice varieties produced in Thailand

- **Quality standard for rice**

Thai Rice Standards are classified into 2 groups as:

1. Standards for White Rice (include cargo rice, white glutinous rice, parboiled rice) concerns in ;

- grain size
- defect ; red kernel, chalkiness, damage kernel etc.
- milling degree

2. Standards for Thai Hom Mali Rice concerns in ;

- grain size
- chemical properties ; amylose content, alkali spreading value

3. Pre/Post-harvest works on paddy fields

- **Water management prior to harvesting**
 - **Discharge water to dry the soil 5 – 7 days before harvest.**



3. Pre/Post-harvest works at paddy field (cont)

- **Harvesting**

- **When to start harvesting**

It is essential to harvest the crop on time, both early and late harvest are detrimental to the grain yield and milling of rice. The harvesting date is about 4 weeks after flowering date.

3. Pre/Post-harvest works at paddy field (cont)

- **Is machine used for harvesting?**

The mechanized harvesting has begun to develop during recent years, because of farm labor shortages at harvesting time, especially where the crop is produced not for self-consumption but rather for commercial purpose



3. Pre/Post-harvest works at paddy field (cont)

Manual harvesting

The manual harvesting, rice stems are cut by sickle and tighted into small bundles, placed on the top of stubble for sun drying about 1-7 days before threshing



3. Pre/Post-harvest works at paddy field (cont)

Nevertheless, the farmer in the South cut individual panicles by knife instead of sickle. The small bundles of individual cut panicles are also sun dried by their farm



3. Pre/Post-harvest works at paddy field(cont.)

- Threshing equipment



Rice grain after threshing

3. Pre/Post-harvest works at paddy field(cont.)

- Drying
 - Sun-drying

The most common paddy drying method is sun-drying. It is first used when the paddy is standing in the field before harvest. It is often used after harvest and threshing when the paddy is spread on drying floors.



3. Pre/Post-harvest works at paddy field(cont.)

Mechanical drying

The alternative to sun-drying is mechanical drying, which uses mechanical equipment for holding the paddy, blowing air through the grain mass and heating air.



Mostly of dryers belong to medium/large company.



3. Pre/Post-harvest works at paddy field(cont.)

• Specifications of the rice shipped out of the farms' gate :

- Moisture content 20-25%
- Removal of pebbles 2-5%
- Packaging in sacks sacks and bulk in small trucks



4. Milling Facilities in Thailand

❖ Small-scale milling facilities :

➡ capacity less than 40 tons/day : 35,653 units

❖ Medium-scale milling facilities :

➡ capacity 40-80 tons/day : 861 units

❖ Large-scale milling facilities :

➡ capacity more than 80 tons/day : 1,952 units

4. Milling Facilities in Thailand



Small – scale



Large - scale



Medium - scale

4. Milling Facilities in Thailand

- Transport to the milling station
Transported by farmers and brokers



4. Milling Facilities in Thailand

To store rice production for self consumption or trading



4. Milling Facilities in Thailand

- **Quality of rice output from milling facilities**

Generally, average of head rice 50% at 14% mc

- **What tricks are being applied at milling facilities to ensure rice is milled properly?**

By milling recovery inspection

