

F.2 Present Condition of Study Area

F.2.1 General Condition

The agricultural production of the Study Area is characterized by dominance of rice production. The production of vegetable, fruit and small animals such as pig, duck and chicken are mainly for self-sufficiency. Therefore, post-harvest processing on commercial basis is limited.

Outside of the Study Area, there exist factories such as fish processing and rice powder processing in Sa Dec area in Dong Thap Province, fruit processing and animal feed production in My Tho in Tien Giang Province. In November 1999, a new fish meat-freezing factory started operation in Cao Lanh District. It is the pioneer factory of processing industry other than rice in the Study Area and is expected to be a seed for the future development of processing industry in the Study Area. On the other hand, there are many kinds of small industries mainly for traditional food processing such as sugar extraction, bread making, noodle processing and confectionery making spreading out the Area.

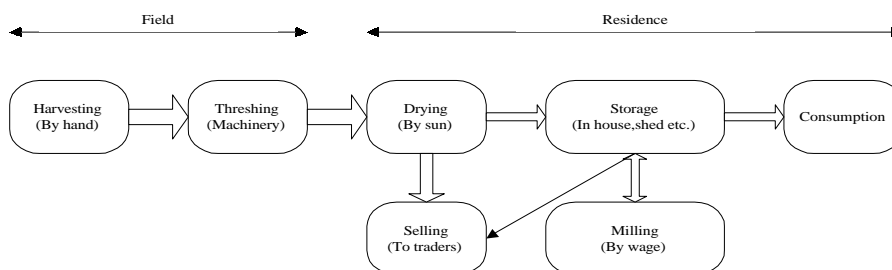
The general characteristics in the sector are as follows.

- An agricultural processing industry other than rice processing has not practically been established yet. Most of them are small-scale traditional industries by family basis. The details of such small processing industries in towns and villages are rather difficult to be grasped.
- Foreign investment for the processing industry is very limited yet.
- Rice processing industry is closely connected to the international market through exporting business.
- Almost all the private companies are family based ones with limited activity scale.

F.2.2 Post-harvest Processing of Rice

The general conditions on rice post-harvest processing are as follows:

(1) Production Stage



Post-harvest Processing by Producer

Harvesting and threshing

The paddy harvested by hand is gathered and threshed on the field or on the road along the field. Mobile thresher of 1-2 tons paddy / hours is popular in the Area. It is estimated by the Provincial People's Committee that about 3,500 and 4,300 units of mobile thresher exist in Dong Thap Province and Tien Giang Province respectively, and among them more than 3,000 units are operated in the Study Area. Most of the mobile threshers are owned by farmers, with only a little part by non-farmer individuals. They render services for farmers in a surrounding area, receiving 4-5% of processed quantity of paddy as the service charge. The mobile thresher is manufactured in local factories in the Area and there are many workshops for repair along roads and canals. The beating method is adopted in the limited remote area.



< Mobile thresher >

Drying

Some farmers sell their products to traders just after they dry the paddy on a net or vinyl sheet in the field. Almost all farmers dry their paddy by sunshine, spreading out paddy on a net or vinyl sheet opened on drying yards and road near their residence. As drying yards of concrete or tile floors are seen but limited¹², many producers dry paddy by utilizing back yard, vacant lot or road. The public road is the most popular place for drying in the rainy season. Therefore, in the year of heavy rain and/or a high flood condition, serious losses occur. Even paddy's germination is reported, due to less sunshine hours and lack of drying place. In spite of such situation, the diffusion of a drying machine is almost negligible.



< Drying on a road >



< Drying yard by concrete >

To cope with this problem, the local government is promoting introduction of vinyl sheet to farmers to protect drying paddy from rain by covering up. Average expenditure for the sheet procurement is

¹ About 5% of farmers have the drying yard made of concrete or tile (DARD, Dong Thap Prov.)

² 1/3 of farmers have drying yards. ("Summery report of Investment & Development Plan for Export Rice Production Area in Dong Thap Province", Jan. 1999, Dong Thap P.C.)

estimated about 200,000 VND for each farmer (average size of sheet is uncertain.). The credit program for spreading mechanical dryers to farmers was also established in 1997-98. The fund financed by VSFC was introduced to farmers with condition of four years by 0.8% / month interest. But no farmers applied to the program because the dryer could be used only two months a year in the rainy season and farmers was afraid of being unable to recover the investment.

Generally, safe moisture content of paddy for preservation is said to be not over than 14%, but it is estimated that moisture content of paddy bought by trader from producer would be about 16%, judging from the moisture content of raw materials in rice mills. Traders handling big volume have portable moisture meter, usually Japanese, but small traders buying paddy from producers in the area do not have them and judge moisture content from their experiences by grasping or biting paddy.

Storage

Most of the producers usually sell as early as possible after harvest, to pay off the loan or get funds needed for the next cropping. Some producers having enough fund store their paddy once and wait to sell them when the market prices rise.

The storage of paddy at farmers level can be found various ways. Paddy in plastic bags are kept on wooden shelf in a living house or in the small storage made by bamboo net and a plant leaves roof. Bulk storage in a big cylindrical container is also applied. In this case, container is made of bamboo net sheet with one meter or more diameter and height. Basement is made by a husk layer of about 5 cm high and an upper side



< Cylindrical container >

is covered by the plastic sheet in case of outside and is opened without cover in case of inside of house. The critical losses by rats and others could not be found but other losses caused by high moisture contents in the rainy season are significant.

Milling for Producer's Consumption

Farmers carry their paddy and ask rice mill located in the same hamlet or commune. The milling charge learned through the RRA study was from D1,500 to D2,000 / 20 kg. The type of machinery in such rice mills varies from small unit combining rubber roll husker and whitener with capacity of some hundreds kg / hour to big plant with capacity of some tons / hour. Number of this type of mill could not be identified but it is estimated that one and more rice mills, exist in each hamlet on average as the result of the RRA study.

About 150 units of mobile rice mill exist in Dong Thap Province their capacity is 1 – 2 ton / hour. The milling charge is similar to the ordinary rice mill mentioned above. This type of rice mill comes to



< Mobile rice mill >



< Small rice mill along creek >

farmer's place by a road, and it is convenient for the farmers in the area remote from a ordinary rice mill. As the number of them has not increased recently, the supply of mobile mill seems to have been almost saturated. The local government also discourages their driving in the town to avoid traffic jam.

(2) Marketing Stage

Rice Mill

There are 800 ~ 900 rice mills with various capacity in the Study Area. Among which about 300 factories are in Dong Thap Province and more than 500 are in Cai Be and Cai Lay Districts in Tien Giang Province. These factories usually equip the warehouse corresponding to each scale and their locations concentrate on the intersection of canals and a canal and a road. Major concentrated area is Hong Ngu, Cao Lanh, Cai be and Cai Lay along Tien River and along the canals from My An to the east.

The machinery used in the rice mill are numerous, such as rubber roll and disk runner type for husker, compartment and tray type for paddy separator, abrasive and friction type for whitener and rotating and reciprocating type for cleaner. Almost all machinery is manufactured locally, copied from the machinery existing in the developed countries. Processing capacity of mills also differ from some hundreds kg / hour to more than 10 tons / hour.

Generally, rice mill forwards milled white rice after husking and whitening but also forward brown rice only after husking as raw material for export processing.