



<Preparation of rice starch>



<Steaming>



<Sun drying>



<Cutter>

F.2.4 Training and Extension of Post-harvest Technology

There are no schools and agencies in Dong Thap and Tien Giang Province covering the Study Area, which provides extension and training services in the field of post-harvest and processing technology for agricultural products.

The agencies concerning vocational training are as follows:

(1) Dong Thap Province

Name	Competent Authority	Location	Content
Vocational Service Center	Ministry of Labor	Cao Lanh	Vocational training, Job mediation etc.
Vocational Service Center	Labor Union (Public)	Sa Dec	Vocational training, Job mediation etc.
Transportation High School (Public)	Dept. of Transportation (Province)	Cao Lanh	Training of driving for car and ship
Job Guidance Center	Dept. of Education and Training (Province)	District Level	Supplemental training for high school students

Vocational Service center (Cao Lanh)

No. of Staff: Administrator 9, Trainer 19

Activities:

- Consultation to labors for job finding
- Cooperation to enterprises for labor finding
- Announcement of job offers (By radio, TV and notice boards)
- Vocational training
- Selling the products made by a practical training

Content of training:

No.	Subject	Hrs /day	Period (Month)	Times /Year	No. of trainee('98)	Charge (1000d)*
1	Sewing	8	6	2-3	67	600
2	Sewing (Industrial)	8	1	10-12	79	200
3	Leather sewing	8	1	10-12	45	200
4	Electric repairing (Goods)	4	6	2-3	26	1,200
5	Electric repairing (Facilities)	4	3	3-4	38	500
6	Motorbike repairing	8	5	2	26	500
7	Car repairing	8	6	2-3	New	1,400
8	Machinery repairing	8	6	2-3	New	1,400
9	Typing	8	2	10	New	250
10	Carving	8	6	2-3	79	1,000
11	Hair dressing	8	4	3	New	600
12	Computing	4	2	10	526	130-350

*Charge is divided to trainer's charge of 35% and expenditures such as administration, material and reduction for machinery of 65%.

(2) Tien Giang Province

Name	Competent Authority	Location	Content
Technical School	Dept. of Industry and Labor (province)	My Tho	Vocational Training
Social College	Dept. of Education and Training (Province)	My Tho	Faculty of food processing will be newly established in 2000 by assistance of Netherlands Government.
Job Guidance Center	Dept. of Education and Training (Province)	District Level	Supplemental training for high school students

Technical School (My Tho)

No. of staff: Administration 4, Trainer 26

Content of training:

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No.	Subject	Hrs /day	Period (Month)	No. of Trainee('98)	Charge/Month (1000d)*
1	Sewing	8	2-6	159	100
2	Sewing (Industrial)	8	2-6		100
3	Metal processing	8	24	29	100
4	Industrial electric	8	24	105	100
5	Electronics	8	24	34	100
6	Motorbike repairing	8	6	30	100
7	Car repairing	8	24	75	100
8	Welding	8	24	37	100
9	Carpentry	8	24	New	100
10	Construction work	8	24	New	100
11	Hair dressing	8	4	New	600
12	Computing	4	2	526	130-350

Job Guidance Center (Cai Be)

Role: The Job Guidance Center in District is train all students in high schools according to the Job Guidance Program issued in 1985. The students have to study a subject selected by themselves in four classes (@ 45minutes x 4 times) a week.

Content of training:

No.	Subject	No. of student ('98)
1	Sewing	645
2	Embroidery	834
3	Industrial electric	1,138
4	Engine repairing	362
5	Carpentry	252
6	Typing	184
Total: 3,415 students / 129 classes		

F.2.5 Result of Milling Test for Rice Samples

There are no reliable data and statistics about raw material quality for rice processing and result of processing. Therefore, at the time of the first field survey, the Study Team collected samples of brown rice for whitening process at three rice mill factories and took them back to Japan for analysis.

(1) Conditions of Samples

	A	B	C
Kind of Rice Mill	SOE	Private	SOE
Date	May 12, 1999	May 10, 1999	May 11, 1999
Location	Sa Dec Town	Cai Lay	Cao Lanh Town
Kind of sample	Brown rice	Brown rice	Brown rice
Moisture content declared	17%	16-17%	16%
Variety	Unknown	Unknown	Unknown
Production area	Dong Thap Prov.	An Giang Prov.	Dong Thap Prov.
	D	E	F
Kind of Rice Mill	SOE	Private	
Date	Oct. 18, 1999	Oct 18, 1999	
Location	Cao Lanh Town	Cao Lanh Town	
Kind of sample	Brown rice	Brown rice (For export)	Brown rice (For local)
Moisture content declared	16-16.5%	16.5-17%	16%
Variety	Unknown	Unknown	Unknown
Production area	Dong Thap Prov.	Dong Thap Prov.	Dong Thap Prov.

(2) Result of Milling Test

Milling test was carried out the by the laboratory in Japan Rice Millers Association. For the samples, the result report is attached as Supplement F.1.

Conclusion

- The rate of whole grains in the samples is greatly attributed to a recovery rate and occurrence of broken rice in the product.
- Red grain and colored grain were contained a lot in the samples that generated more broken rice and reduced a recovery rate in the milling process. It may be the problem of cultivation technology.
- As higher moisture content of brown rice made higher occurrence of broken rice and lowered recovery rate. Especially for long grain, the moisture content of raw materials needs to be regulated below 14%.
- Almost all kernels below 1.6 mm width moved to bran in a whitening process, then it might be better to separate them by aspirator and sieve before whitening.
- High content of broken rice in the samples might be caused by low efficiency of a husking machine.

- An whitening machine of abrasive type is more efficient than friction type to raise the recovery rate.

(3) Comparison with Indonesian Rice

Regarding the above result, the comparative evaluation was carried out with the same test result of two Indonesian rice samples. The result is shown in Supplement F.2.

Conclusion

Though the evaluation was carried out comparing with only Indonesian rice, it is clear that the quality of brown rice and milling products of Vietnam are very relatively low. The countermeasures in the both stages of production and processing are strongly suggested as follow:

- To improve the quality of rice as raw material for processing by introduction of qualified seed, proper management for cultivation and proper management of moisture content by drying.
- To improve the quality of product by appropriate selection and combination of machinery, and improvement of processing and management technology.