# THE STUDY ON INTEGRATED AGRICULTURAL DEVELOPMENT PLAN IN THE DONG THAP MUOI AREA VIET NAM INTERIM REPORT

Package : Plastic / Jute bag

Stack : Stacked on wooden pallet

Max. height of stack : 20-30 stages

Width of passage between stacks : 1-3 m

Distance between stacks : 0.5-1 m

Distance between wall and stack : 0.5-1 m

# **F.2.3** Other Processing Industry

As mentioned before, large scale processing industry has not been established yet in the Study Area other than rice processing. The small-scale industry of the traditional food industry such as noodle and confectionery processing exist widely in the Area. This small-scale industry is an important area for the development, though it is difficult to grasp the whole shape and the detail condition of this industry.

## (1) Frozen factory for marine products

The frozen factory for marine products was constructed in Oct. 1999, along Tien River in Cao Lanh District. This enterprise has a long history in this business in Sa Dec City and moved the factory to the place, because of the difficulty for expansion of the existing factory. They process and freeze sea and river products such as white meet fish, octopus and squid, and export to foreign countries such as Hong Kong, Japan, USA and Australia. Their annual turnover reached twelve million US\$ in 1998.

It is the pioneer factory of processing industry other than rice in the Study Area and the factory is expected to be a seed for the future development of processing industry in the Study Area.

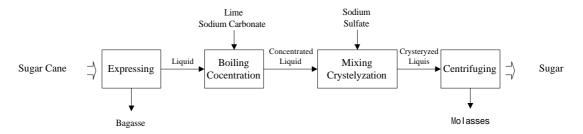
### (2) Sugar mill

Sugar mills managed by family base are located along Tien River. The general conditions of two factories studied are as follows:

		Factory 1	Factory 2
Location		Cao Lanh City	Suburb of My Tho City
Establishment		1991	1987
Usual price	Procurement of cane	200 ~ 250VND/kg	250 ~ 300VND/kg
	Selling of molasses	2,700VND/kg	-
	Selling of sugar	5,900 ~ 6,000VND/kg	6,400 ~ 6,500VND/kg
This	Selling of sugar	4,000VND/kg	4,100 ~ 4,500VND/kg
year			

Recently market price of sugar has sharp by declined because sugar made in Thailand has been

imported, that might be smuggling. Then, many mills have stopped operation this year due to low price. Since small sugar cane fields are spread out widely along Tien River, smooth and effective collection of the products is very difficult. It takes about three days after harvesting to expressing. Then, it is judged that the sugar content of cane is reduced much. Some individual machines such as expressing machine, mixing vessel (crystalyzer) and centrifuge are used. The recovering rate of products is: about 12% for molasses and 5% of sugar. Lime, sodium sulfate and sodium carbonate are used for processing.



**Flow Chart** 







<Expressing Machine>

<Mixing Vessel>

<Centrifuge>

#### <Conclusion>

- It is hard to judge whether the sugar cane is a suitable crop for such lowland as the Study Area.
- It is difficult the product to have market competitiveness to imported one under such ineffective and uneconomical condition on production, procurement and processing.

#### (3) Feed mill

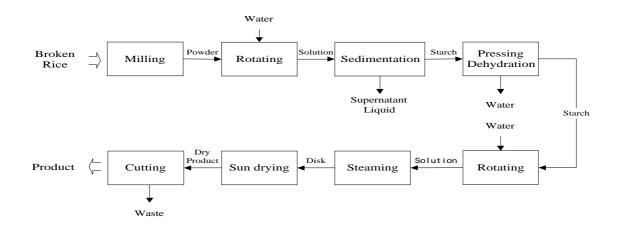
Small scale feed mills are operating in My Tho and Sa Dec, though these are out of the Study Area. It is important industry to develop the livestock industry. The raw materials locally available are rice bran, broken rice and dried small fish. Maize, the major component of feed, is imported as nutritional ingredients.

#### (4) Rice bran oil mill

The vegetable oil factory in My Tho, currently producing oil from soybean, ground nut and copra of coconut by expellers, decided to introduce rice bran oil extraction plant receiving approval of the Provincial Government and the commitment of subsidy for investment. It needs very sophisticated technology for proper operation of the plant, compared to the physical extraction plant. If it will be realized, it will be the first rice bran extraction plant using organic solvent in Viet Nam and the one of the most effective way to use rice bran generated largely as a by-product in rice mills. Additionally, the de-oiled bran, by-product of this process is also a valuable commodity for feed industry more than raw bran and is also expected to be exported. The favorable impact to the Study Area is expected by the success of this plan.

#### (5) Traditional processing industry

Small-scale industry of traditional foods such as noodle and confectionery exist widely in the Study Area. The characteristics of these businesses are i) mostly handwork by family member, ii) small production and only seasonal production in some cases, iii) low mechanization level and iv) low level of quality control including hygiene control.



Flow Chart of Rice Noodle Production