SOME MEASURES TO IMPROVE RICE EXPORTS QUALITY

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From 1989 until now our country has scored significant progress in rice export, exported 14.5 million tonnes worth US$3.38 billion in the period 1989-1996, some two million tonnes in the first half of this year, up by 50% against the same period last year and equivalent to the total export volume of 1994. However, the efficiency of rice export was not high because Vietnamese rice prices are lowest on the world market. Furthermore, if based on the lowest price (US$186.3 in 1990) and the highest one (US$284.9 per tonne in 1992) of rice exports in the period 1989-1996, we see the fluctuation is around US$100, that is, Vietnamese prices of rice exports is not stabilized (while the Thailand's difference is US$30 in the same period). In the first six months of this year, although the volume of exported rice boosted, but the average price dropped by US$68.8 per tonne. One of the reasons is the quality of our rice exports is still low and varying. As a result, effective measures should be focussed on to strengthen the efficiency of rice export in the coming time.

The rice quality includes two factors: taste and size, each factor also depends up on the natural and technical conditions. Regarding rice taste, it results from rice strain (commonly, natural rice strains give good taste, they sell for high prices but their productivity is low, on the contrary, hybrid strains lead to less quality and lower prices); meanwhile, the technical conditions in the process of harvesting and processing also contribute to improving the rice quality (for example, if not drying paddy on time, not meeting technical requirements in processing, rice will become wet and yellowish, keeping rice in stock for a long time also deteriorate rice quality). Similarly, regarding rice size, it depends on rice strain (length and color of grain); and husking and polishing technology. Thereby, to ensure rice exports quality and satisfy requirements of various customers, we should solve problems in production completely (planning areas specializing in rice cultivation for export, selecting and hybridizing rice strains), improve techniques for reaping and processing, upgrade and modernize husking technology. We would like make some suggestions as follows:

1. PLANNING AREAS SPECIALIZING IN RICE CULTIVATION FOR EXPORT

This is a ground for securing material resource convenient to processing and exporting, and the uniform degree in quality. As we know, Vietnamese rice exports mainly come from the Mekong Delta, so we will rely on the Delta conditions to put forward the planning areas specializing in rice cultivation for export.

In reality, 60% of rice annually used outside the Mekong Delta is usually for export, the rest meets domestic demand (consumption and reserve). According to the forecast of food production in the time to come, the country's productivity will gradually increase in seven rice growing areas (southern mountainous area and midland, Hồng River Delta, former Zone 4, central coastal area, central highlands, south eastern provinces and Mekong Delta). The capability of each area to satisfy local food demand will be improved, therefore the volume of rice exports originating from the Mekong Delta will also rise because it won't be used for supporting other areas (see data in Table 1). To reach 4 million tonnes of exported rice by 2000, the Mekong Delta shall ensure 6.7 million tonnes of paddy eligible for export (based on the percentage of processing paddy into rice - 60%), according to the Mekong Delta's estimated productivity by the year 2000 (4.7 tonnes/ha), the Delta shall need around 1.4 million hectares specializing in rice exports, or 40% of the total rice growing area of the Delta, and similarly, 1.5 million ha or 44.1% for 8.3 million tonnes of exported rice by 2005; and 1.6 million ha or 48.5% for 10 million tonnes of exported rice by 2010. By this calculation, the solution is to plan from 1.4 to 1.6 million hectares specializing in rice cultivation for export in the Mekong Delta in the time to come.

Table 1: FORECAST OF TARGETS FOR SPECIALIZATION IN RICE CULTIVATION FOR EXPORT

	UNIT	2000	2005	2010
+ Total VN's rice output	mil. tonnes	29.8	32.0	33.8
- The Mekong Delta's percentage	%	55.0	58.0	60.0
- The Delta's output	mil. tonnes	16.4	18.6	20.3
+ The Delta's output for balancing	mil. tonnes	9.0	10.3	11.2
- For local consumption	mil. tonnes	2.6	2.7	2.8
- For other purpose	mil. tonnes	6.4	7.6	8.4
+ Estimated volume of rice exports	mil. tonnes	4.0	5.0	6.0
-Percentage	%	62.5	65. 8	71.4
+ Rice exports equivalent to paddy	mil. tonnes	6.7	8.3	10.0
+ Estimated rice productivity of the Delta	tonne/ha	4.7	5.5	6.2
+ Area specializing in rice exports(1)	mil. ha	1.4	1.5	1.6
+ Total rice growing area(2)	mil. ha	3.5	3.4	3.3
-Percentage of (1) to (2)	%	40.0	44.1	48.5

Geographically, the Mekong Delta is divided into six sub regions: (1) fresh water alluvial sub-region along Tiền and Hậu Rivers; (2) salted alluvial sub-region along the East Sea; (3) Cà Mau peninsula; (4) low-lying sub-region in the west of Hậu River ; (5) Long Xuyên quadrangle and (6) Đồng Tháp Mười sub-region. The sub-region (1) stretching

from the Vietnam-Cambodia border, passing Đồng Tháp, An Giang, Tiền Giang and Vĩnh Long Provinces to Cần Thơ Provinces has the biggest rice growing area among six sub-regions (836,000 ha with two or three crops per year) and natural, economic and social conditions favorable for rice cultivation as follows:

- Regarding geological and soil structure, its alluvial land is rich in nutrients (nitrogen, phosphor and kalium) extremely suitable for rice.
- The farmers firmly understand both theory and practice of rice cultivation, use new strains and know how to raise productivity.
- Investments in irrigation and mechanization are also higher than other sub-regions.
- The level and scale of rice production have developed well. Specialization in rice cultivation has made good progress (for example, Cai Lậy District of Tiền Giang Province broke a record in rice production with its output of 11 tonnes/year because it had concentrated on specializing in rice cultivation).

In addition, the sub-region (1) also has advantages in goods circulation due to its network of waterways, including two important communication axes - Tiền and Hậu Rivers, very useful for rice export. As a result, we propose to build the sub-region (1) into the major area specializing in rice cultivation for export in the Mekong Delta. Nevertheless, the sub-region (1) is favorable only for winter-spring and summer-autumn crops, the area growing rice in the winter crop is not large due to flood. Therefore, the Mekong Delta's crops should be considered to determine more adjacent areas specializing in rice cultivation for export with a view to securing three-crop production in the Delta per year.

According to above-mentioned data, a part of rice growing area of Long An, Sóc Trăng, Kiên Giang and former Minh Hải Provinces can be included in the area specializing in rice cultivation for export. Most of the winter crop is planted in Sóc Trăng, Kiên Giang and Minh Hải Provinces. Thereby, we suggest an area of 2 million ha for the plan of 1.4-1.6 million ha specializing in rice cultivation for export as follows:

- The winter - spring crop: 700,000 ha belonging to Long An, Đồng Tháp, An Giang, Cần Thơ and Kiên Giang Provinces.
- The summer - autumn crop: 900,000 ha belonging to Long An, Đồng Tháp, An Giang, Tiền Giang, Vĩnh Long, Cần Thơ and Kiên Giang Provinces.
- The winter crop: 400,000 ha in Sóc Trăng, Kiên Giang and Minh Hải Provinces.

Table 2: THE MEKONG DELTA'S RICE GROWING AREA IN 1995 BY PROVINCE AND CROP

Unit: 1,000 ha

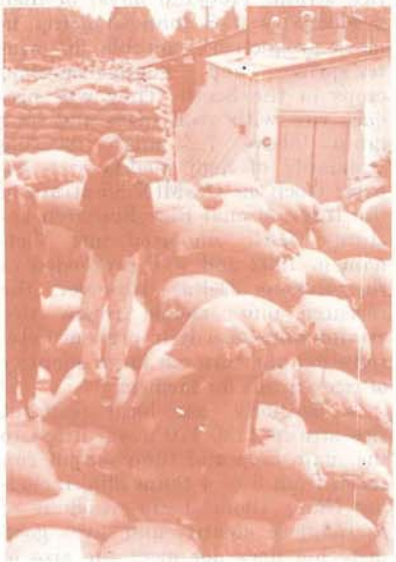
PROVINCES	WINTER-SPRING CROP	SUMMER - AUTUMN CROP	WINTER CROP	TOTAL
Long An	156.0	120.0	49.7	325.7
Đồng Tháp	175.0	185.0	1.0	361.0
An Giang	178.0	185.0	28.8	391.8
Tiền Giang	79.3	178.6	11.4	269.3
Bến Tre	22.1	21.0	49.6	92.7
Vĩnh Long	72.7	124.0	9.3	206.0
Trà Vinh	35	50.0	84.3	169.3
Cần Thơ	165.6	231.0	6.2	402.8
Sóc Trăng	45.0	99.0	132.6	276.6
Kiên Giang	107.0	168.0	103.3	378.3
Minh Hải	-	36.0	281.1	317.1
The Delta	1.035.7	1.397.6	757.3	3.190.6

Source: The General Department of Statistics - Statistics on Vietnamese Agro - Forestry - Fishery in the period 1985-1995, Thống Kê Publisher, Hà Nội 1996.

2. SELECTION AND HYBRIDIZATION OF RICE STRAINS

This is a major task to enhance the productivity and quality of rice exports. Generally, short-term kinds of rice (100-120 days) should be developed to meet the country's requirement of three crops per year. Regarding area specializing in rice cultivation for export, short-term rice should be selected to satisfy standards for export such as taste and size. At present, many local good strains can replace imported ones such as VNĐ 95-19, IR 59656-68, OM 1570, OM 1754, IR 59673, OM 1325, IR 1704...As for provinces affected by floods (Long An, Đồng Tháp, An Giang, Tiền Giang, Vĩnh Long, Cần Thơ and Kiên Giang), especially the flood peak takes shape in mid-Augusts annually, so the flood places should grow extremely short-term rice strains (90 days) for the summer - autumn crop so that rice is reaped before flood rises and the losses can be prevented and rice output maintained.

At the same time, hybrid rice strains should be brought into production and their percentage raised to 20% by the year 2005 and 30% by 2010 to boost rice productivity and output (hybrid rice strains made from two species, three species have productivity 20% higher than normal strains), and secure biological diversification in rice production according to the Ministry of Agriculture and Rural Development's policy. In reality, two-species rice strains imported from China suitable for the wet and cold climate in the North are growing well (planting area has exceeded 100,000 ha only for few years). In the South, farmers need other hybrid strains appropriate to dry weather all the year round. Currently, we hope to



produce two-species and three-species hybrid strains giving good taste and size for export in southern provinces, especially in the fresh water alluvial sub-region along Tiền and

Hậu Rivers.

In addition, the production of fragrant rice for export has not yet developed, the Government should request rice exporting firms and relevant agencies to provide information and guidelines to research units and farmers so that they intensify production of fragrant rice for export, raising its percentage to 25-30% of rice exports by the year 2000 (and afterwards to around 50% quickly). There are some measures to heighten production of fragrant rice for export as follows:

- Firstly, use short-term hybrid rice strains (100-120 days) of high productivity (6-8 tonnes/ha/crop in mass production), suitable for winter-spring and summer-autumn crops in the South. They will produce rice with good taste and long grain (above 7.2 mm), meeting standards of high quality rice exports (such as JASMIN-85 strain of the International Rice Research Institute (IRRI) imported into Vietnam in 1992 and well proceeded in the Mekong Delta). However, the research units should renew rice strains continuously to prevent deterioration and turn out large quantity of rice strains for farmers.

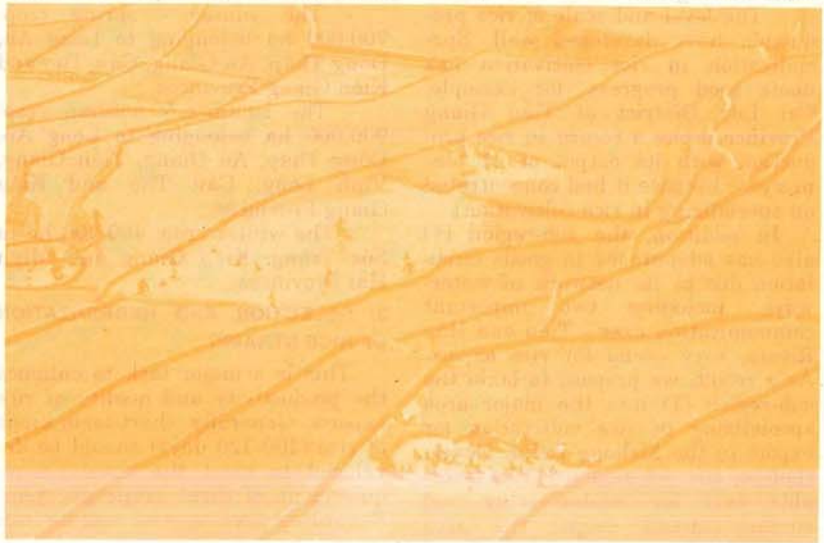
- Secondly, use local fragrant rice strains (150-170 days) fitted to the main crop and their output can reach from 3 to 4 tonnes/ha, including Nàng Thơm strain which is of Vietnamese identity and gives good taste but does not meet the size of high-quality rice exports because its length is only 6.2-7 mm, research units should continue to select and renew strains for export such as increasing the length to above 7 mm, and reducing the growth time to around 120 days so that they can be put into production even in winter-spring and summer-autumn crops and the output of fragrant rice for export can soar quickly.

- Thirdly, import famous strains of rice speciality in the world and make them suitable for Vietnamese conditions so as to process special rice for export. These strains usually have low or medium productivity, but they have very high commercial values. For example, JAPONICA strain coming from Japan, produces short, fragrant and sticky rice grain with a capacity of 3 tonnes/ha/crop (equal to 70% of other strains for rice export), but their rice can sell for US$800-1,000 per tonne (three or four times higher than prices of normal rice). Once firms can process JAPONICA rice, they will find new markets for their products such as Japan and Western Europe. Although the export volume of this rice is not large but its efficiency is very high, we should plan some areas to produce this rice to earn more US dollars for our country.

In addition to the study on hybridizing rice strains, the production of rice strains should be specialized to overcome the situation of uncontrolled rice strains supply (most of farmers nowadays deduct part of their products to make seeds for the next crop, the change of rice strains is slow and downgraded strains may be used). The farmers should be provided with enough eligible rice strains and given guidelines for changing rice strains on time in accordance with the market demand. Regarding the areas specializing in rice cultivation for export, we propose each sub-region should build a farm specializing in rice strains production to supply them to the whole sub-region.

3. HARVESTING AND POST-HARVEST PROCESSING

The process of harvesting and post-harvest processing is divided into the following phases: reaping, transporting, pulling off rice ears, drying, cleaning, storing and preserving. The total loss in this process currently accounts for 9-11%, so this loss should be cut to increase output and prevent deterioration due to poor processing. Regarding the summer-autumn crop in the South on the whole and the Mekong Delta in particular, the main harvest takes place in the middle of the rainy season, if rice is not dried on time, it will become humid and yel-



lowish and cannot be exported. Because most of farmers do not have enough facilities to dry and preserve rice, they have to sell their rice just after harvest (according to the MARD, in the Mekong Delta, the country's commercial rice hub, 75% of farming households sell rice just after harvest), so the rice humidity is often very high (16-18%) against the norm for processing or preserving (14-14.5%). Consequently, firms can hardly find good rice material to process for export, this leads to a paradox that although farmers enjoy a bumper crop, but their income reduce due to drop in rice prices, finished rice has lower quality but higher price, so it can be hardly exported and rice exporting firms suffer losses. To surpass the said situation, the following tasks should be paid attention to:

- On the one hand, the Government should make policies on capital support (giving soft loans) and enhance technical guidance for farmers so that they can invest in innovating equipment of pulling off, husking, transporting and drying, warehouses and facilities to preserve rice in small scale suitable for farming households.

- On the other hand, the Government, via the National Reserve Department and state-owned rice trading companies, should build the system of drying machines and intermediary warehouse, modern large reserve stock, and facilities serving the rice processing in localities, especially in areas specializing in rice cultivation for export. According to the MARD's estimate, VNĐ400-500 billion is needed to develop the system of drying rice and VNĐ500 billion at least to set up more rice stocks.

4. UPGRADING AND MODERNIZING THE RICE HUSKING SYSTEM

To strengthen rice exports quality, the rice husking technology must be improved as follows:

- Install equipment to clean and dry paddy and secure necessary standards before husking, if rice meet the humidity standard (14%), the percentage of broken grain will be reduced while husking.

- In processing, old method (using rice mortar) should be replaced with modern technology (using husking machines). This will produce whiter rice, lower percentage of broken grain and help preserve rice longer. Rice will be selected carefully and completely with a view to removing humid and yellowish rice and remaining paddy. In the last phase, semi-finished rice will be classified into groups: complete rice (two ends are sharp), broken rice at various levels (equal to 80%, 50%, 25% of the intact rice). Thereby finished rice will be produced by mixing these kinds of rice at the foreign customer's request.

In reality, the husk represents 20-22% of the rice weight, if the brown rice is husked at the rice growing areas, and the rice will be brought to factories near the consumer market for polishing, the transport fee will be lowered significantly. Moreover, the rice after husking will have enough time to become cool during the transport. This will reduce the percentage of broken rice when polishing, losses, and by-products. As a result, economic efficiency will be enhanced in comparison with the case that rice is husked and polished at the same place (after husking, rice is still hot, so it is easily broken when polishing). Currently, the process of production and supply of rice exports is implemented in two phases: Firstly, rice is husked into materials at the production places (in the Mekong Delta) to remove husk and bran (making up 30% of the rice weight); finally rice materials are transported to polishing establishments in HCMC to secure export standards before being shipped. This practice only reduces transport fee and makes favorable conditions for supervising, it does not lower the degree of losses, the percentage of broken rice is still high (20-30% of the rice amount) and the rice can hardly meet standards for export. Therefore, we propose the following process to speed up the quality of rice exports:

- The Government and state-run enterprises trading in rice should help farmers invest in a network of small-size husking machines (each has a capacity ranging from 500 to 1,000 kg of rice per hour) with the aim to supply plentiful rice materials. With an investment capital of VNĐ30 million for a husking unit (one tonne/hour), the capital needed for a network of husking machines in the Mekong Delta is about VNĐ100 billion from now until the year 2000 and about more VNĐ100 billion in the period 2001-2010.

- At the same time, state-run rice trading companies should play a leading role in the investment in a large-size system of husking plants convenient for rice circulation along waterways from southern provinces to HCMC. In particular, the Government should build some industrial complexes for rice export (combining intermediary warehouses with husking, polishing and package making plants...) near ports (mainly Sài Gòn and Cần Thơ ports). Besides, investors should develop new items such as instant rice to meet the market demand. Regarding investment capital, with home made equipment and machinery which include some imported components, an investment capital needed for a capacity unit (1 tonne/hour) in a husking and polishing plant is about VNĐ1.2 billion, the total capital required to develop a system of rice husking and polishing plants reaches some VNĐ800 billion from now to the year 2000, and additional VNĐ500 billion in the period 2001-2010■