

VIETNAM

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INTRODUCTION

The Ministry of Fisheries of Vietnam (MOFI) with its executive authorities - National Fisheries Inspection and Quality Assurance Centre (NAFIQACEN) and Fishery Resource Protection Department, is the competent agency to control the food safety and quality of fishery products 'from farm, catching, to wholesales'.

On 2 May 2003, the Government of Vietnam issued the Decree No 43/2003/ND-CP on the function, task and organization restructuring of Ministry of

Fisheries. According to this decree, NAFIQACEN and Fishery Resource Protection Department is merged to a new organization called National Fisheries Quality and Veterinary Department (NAFIQAVED). This restructuring purposed to ensure the more effective operation 'from farm to wholesale'. NAFIQAVED is now the competent authority to guide and inspect quality and safety assurance of food industry, in order to ensure the safety of final product and protect the consumers.

FISH PROCESSING INDUSTRY IN VIETNAM

The fishery sector is one of the most important industries in Vietnam. In 2000, it was the fourth largest hard currency earning industry of the country. The fish processing industry has gradually progressed since

then. There is a noticeable increase in the number of fish processing plants and total fish production and export (Table 1).

Table 1. Figure of fish processing establishments and fishery products export, 2000-2003

No	Detail	Year			
		2000	2001	2002	By June 2003
1	Total production (in 1000 metric tonnes)	2,003	2,207	2,411	1,235
2	Export turnover (in million US\$)	1,402	1,760	2,014	988
3	Export volume (in 1000 metric tonnes)	276	359	444	217
4	No. of export-oriented fish processing establishments	238	264	279	335

As shown in Table 1, the total fisheries production was growing from 2,003,000 tonnes in 2000 to 2,411,000 tonnes in 2002. This trend is expected to continue in 2003 as the half-year production has already reached 1,235,000 tonnes. At the same time the number of fish processing factories has been increasing consistently from 238 factories in 2000 to 322 factories by Jun 2003. Some of them are newly established. Most of them used to be small scale and now they are registered as fish processing factories producing fish for export.

The fish processing industry in Vietnam is classified into four main categories, that is, frozen, dried, canned and fermented fish products. Frozen fish product is the largest group, in terms of both volume and number of

fish processing establishments. It makes up 71% of total fishery product export and almost 78% of the total number of total fish processing establishments. The products included in this group are frozen shrimp (raw or cooked), fish (mainly fillets), cephalopods (cleaned, rings), value-added (spring rolls, buttered or breaded) and surimi.

Dried fish product is the second largest group, which makes up to 8% of the total production volume, and 18% of total number of fish processing establishments in Vietnam. Dried fish processing factories are mainly small-scale establishments unlike frozen fish products. Dried fish products include squid, tiny shrimp, anchovy, shark fin and some seasoned products.

Table 2. Number of registered fish processing factory (Column 1) and HACCP- implemented factory (Column 2)

Type of production	2000		2001		2002		2003	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
Frozen products	NA	NA	NA	NA	229	112	259	133
Dried products	NA	NA	NA	NA	38	4	59	9
Canned products	NA	NA	NA	NA	7	5	11	7
Fermented products	NA	NA	NA	NA	5	2	6	2
Total	238	68	264	78	279	123	335	152

Canned and fermented fish products are the smallest group, though the volume produced and the number of fish processing establishments has been increasing gradually. However, it will take some time for this category to be a developed sub sector. Recently, canning factories have started to produce canned shrimp and canned swimming crabmeat mainly for export.

Fermented fishery products are normally produced on a small scale. Now, due to the requirements of importing markets, fishery processors are more aware that the implementation of HACCP in their establishments can give them more competitive edge in entering new markets. The export of fermented fish products, such as fermented shrimp, anchovy and fish sauce, is still in the infant stage, though it is growing.

HACCP IMPLEMENTATION IN THE FISH PROCESSING INDUSTRY

Implementation of HACCP is mandatory for factories that export their fishery products to EU and US. There are a growing number of countries which require the fish products exported to their market to be handled, prepared, processed, stored and transported under hygiene conditions and safe for human consumption. This is in line with the application of HACCP in fish processing establishments.

The implementation of HACCP in fish processing establishments is a necessity for a seafood-exporting

country in order to maintain and promote its fishery sector in a competitive world seafood trade. Hence, since 1997, based on the project sponsored by DANIDA, MOFI introduced HACCP to fish processing establishments. Since that time the number of establishments having HACCP plans in place has been increasing. The number of factories that implement HACCP program and approved by MOFI and EU has also increased respectively from 68 to 152 factories and 49 to 94 factories (Table 3).

Table 3. Number of fish processing factories during 2000- 2003

No.	Indicators	Year			
		2000	2001	2002	By June 2003
1.	No. of fish processing factories	238	264	279	335
2.	No. of MOFI approved factories	68	78	122	152
3.	No. of EU approved factories	49	61	68	94
4.	Non HACCP plan	144	172	157	147

The implementation of HACCP program in fermented and dried fish products is much slower than frozen and canned. One of the major reasons is lack of experienced and qualified personnel in dried or fermented fish establishments. Hence when those factories intend to apply HACCP program in their establishments, they have to invite the HACCP trainers from NAFIQACEN or VASEP Co. Ltd (Vietnam Association of Seafood Exporter and Producers) to conduct training on HACCP to the managers, quality controllers and line workers based on the training manuals on HACCP program recognized by MOFI.

Amid much slowness, the implementation of HACCP in fermented and dried fish products still continue to grow. The major reason is that the standard requirements for export of these products, even for Asian countries, are getting higher. Importing countries, like

South Korea and China require the fishery products to be processed under hygienic conditions, which is similar to Vietnam's seafood safety procedure that is based on HACCP. This encourages the food processing establishments to develop and implement HACCP programs in their premises.

The assessment and certification of HACCP is carried out by NAFIQAVED based on the regulation on assessment and approval of food safety and hygiene assurance condition for fish products, as regulated in Decision No. No 649/2000/QD-BTS and other standards for food safety. Upon inspection, the inspectors from NAFIQAVED check the establishments' compliance to HACCP and hygiene program to the current regulation and standards. Based on this inspection, the establishment will be graded A to D. A and B-grade establishments have the right to export their products.

On the other hand, C and D-grade establishments are required to improve the facilities and HACCP program as recommended by NAFIQAVED inspectors.

Currently most of the accreditations for HACCP implementation in fish processing establishments are

conducted by NAFIQAVED. However, some fish processing establishments have enlisted third-party accreditation, e.g. SGS from UK and Surefish from US to audit their HACCP plans and systems. Due to their high cost, not many fish processing establishments use third-party accreditation.

OTHER ISSUE

Since the competent authorities in EU, US and other importing countries has been applying a strict control to antibiotic residues in fishery products, such as chloramphenicol (CAP) and nitrofurans (NTR), MOFI and food processing establishments have put a lot efforts to avoid the presence of these antibiotics in fish products. Some measures conducted are as follows:

- MOFI issued the decision No 01/2002/QD-BTS to prohibit the production, trading and use of 10 antibiotic substances in the market, farming, preservation, processing of fishery products
- MOFI assigned its competent authorities, from the central to locals, to monitor and control the import, trading and use of antibiotics in the market, farming, preservation, processing of fishery products
- MOFI invested Gas-chromatography/mass-spectrograph (GC/MS) and Liquid-chromatography/mass-spectrograph (LC/MS/MS) for NAFIQAVED's laboratories and sent the technicians to Netherlands laboratory to learn

the method of detecting CAP and NTR in fish products

- Food processing industries are required to monitor the HACCP application especially at receiving of raw material step and conduct effective measures to ensure the safety of their products
- Food processing industries are required to ensure that their raw material come from approved source and the suppliers have undertaken certain measures that raw materials are free from CAP and NTR

After conducting a series of measures mentioned above, Vietnam has regularly avoided the presence of CAP and NTR in fish products. Based on the action undertaken by Vietnam fishery sector, EU has cancelled the testing requirement of all Vietnam shrimp upon entry of EU market. In addition, EU has also added 32 more Vietnam fish processing establishments into the list of 62 Vietnam factories that have already been approved by EU to export their fish product to EU market.

HACCP TRAINING

MOFI, in cooperation with SEAQIP project, conducted HACCP training courses since 1997, targeted on the fish processing establishments' manager, quality control officers and line workers. Since 2000, HACCP internal audit training courses have

been conducted by SEAQIP to MOFI officers, NAFIQACEN inspectors and fish processing establishments' quality control officers. The number of participants attending those training courses is shown in Table 4.

Table 4. Number of participants of HACCP and HACCP audit training courses

	2000	2001	2002	By June 2003
No. of participants in HACCP training courses	495	700	826	481
No. of participants in HACCP audit training courses	28	26	16	3

The number of participants in HACCP training courses has been increasing gradually each year due to the rapid growing number of fish processing factories as well as increasing number of the previously non-

HACCP fish processing establishments, which are now aware of the importance of HACCP implementation to their business.

PROBLEMS/ DIFFICULTIES ENCOUNTERED

1. The methods and equipment for determining the harmful substances in fish and fish products are developing rapidly, especially in developed countries. Less developed country like Vietnam is unable to follow this rapid development as fast as its developed counterparts
2. The situation of small-scale production of fishery products from catching, farming to processing makes the problem more complicated. The food processing establishments are still exposed to the risks coming from the presence of hazardous substances in raw material. Government shall spend more time, expenditures and personnel to assist the industry
3. Lack of qualified personnel to develop and conduct HACCP programme in the fish processing establishments
4. The implementation of HACCP in traditional fish product establishments are more difficult than its frozen and canned counterparts, mostly because of the lack of trained workers in traditional fish product establishments
5. Difficulty in developing HACCP programs in traditional fish processing establishments due to lack of risk assessment of traditional fish products

NATIONAL STRATEGY

Vietnam perseveres to introduce HACCP program to fish processing establishments and to implement the relating auxiliary program such as hazardous substance monitoring program in farming fish and fishery products, Good Aquaculture Practices, application of technical standards set up for different types of fishery production. This measure is represented by the annual program for safety and quality assurance of fishery products issued by MOFI. The annual program concentrates on:

1. Promoting the capacity of competent authority - NAFIQUVED both personnel and equipment from the centre to the local level
2. Introducing HACCP and relevant food safety assurance programs to processors, fishermen, fish farmers, traders of both raw materials and end products to ensure the safety and quality of fishery products
3. Controlling and monitoring the implementation of the mentioned programs to protect the consumer both in domestic and export markets
4. Cooperating with regional and international countries to upgrade and improve its capacity in the assurance of the quality and safety of fishery products

CONCLUSION

It has been 10 years since HACCP was first started in the Vietnam fish processing industry after the first project sponsored by UNIDO was carried out and 4 years since the workshop of HACCP Application in Fish Processing Industry in Southeast Asia coordinated by MFRD. The Vietnam fish processing industry has shown a rapid growth on the development of the fishery sectors, both in quality and quantity. Though the importance of

HACCP is greatly acknowledged, its application in Vietnam fish processing industry still faces some hurdles. The Vietnam government will continue to introduce and encourage HACCP implementation to the fish processing industry. More effort, emphasizing on training in internal and external HACCP audit will be conducted for government and fish processing establishments officers.