

ASIA INVEST PROJECT

“TECHFOOD EU-ASIA”

**THE REAL SITUATION OF FOOD
PRODUCTION,
PROCESSING TECHNOLOGIES AND
TRADING AND SOME ISSUES ON FOOD
SAFETY IN VIETNAM**

1. The real situation of food production, processing and trading businesses in Vietnam

1.1. General situation of food production, processing and trading businesses

Food producing, processing and trading businesses are understood as the ones established by an eligible individual or organization with all conditions stipulated by the laws: capital, location. A food producing, processing and trading business can include 1 person, or thousands of people.

In accordance with reports from 64 provinces and cities all over the country, current number of food producing, processing and trading businesses is large. There are now 421,615 food producing, processing and trading businesses all over the country, in which, food producing, processing businesses accounting for 12%, food trading businesses accounting for 38.4% and catering service businesses making up 49.6%. Therefore, we can see that the catering trade is the most popular type of food businesses in the country. Food producing, processing businesses make a low rate, including mainly manual processing under the form of household or individual. And there are not many production businesses with industrial scope, using modern technology with application of advanced quality management systems like HACCP, ISO.

Table 1: Quantity of food producing, processing and trading businesses

No.	Item	Total	
		Quantity	Percentage (%)
1	Food producing, processing businesses	51,007	12
2	Food trading businesses	161,837	38.4
3	Catering service businesses	208,771	49.6
	Total	421,615	100

1.2. Real situation of food producing, processing businesses in division of areas

Our country is divided into 7 areas. The Northern Lowland with two large cities, named Hanoi and Hai Phong and some provinces attracting large investment from foreign countries like Vinh Phuc, Ha Tay, has the largest number of 84,118 food businesses, accounting for 20%. The Southeast with Ho Chi Minh City, the national economic center, and Dong Nai, the province having a lot of industrial parks and processing zones, has 77,772 food businesses, making up 18.4% of that of the country.

It can be affirmed that the Northern Mountainous area and the Southeast area concentrate most of food businesses in the country. In these two areas, the percentage of catering businesses is high, making up 43.1% and 61% respectively. The percentage is 50% for Cuu Long Delta and the Central Coastal area.

Table 2: Quantity of food producing, processing and trading businesses in division of areas

No.	Area	Total	Producing, processing		Trading		Catering service	
			Quan.	Perc. (%)	Quan.	Per c. (%)	Quan.	Perc. (%)
1	Northern Mountainous area	71,723	11,143	15.5	33,624	46.9	26,956	37.6
2	Northern Lowland	84,118	10,367	12.3	37,517	44.6	36,234	43.1
3	North Central	43,394	5,504	12.7	17,477	40.3	20,413	47.0
4	Central Costal	52,064	9,403	18.0	13,107	25.2	29,554	56.8
5	Tay Nguyen	18,843	2,047	10.9	9,382	49.8	7,414	39.3
6	Southeast	77,772	6,651	8.6	23,613	30.4	47,508	61.0
7	Cuu Long Delta	73,701	5,892	8.0	27,117	36.8	40,692	55.2
Total		421,615	51,007	12.0	161,837	38.4	208,771	49.6

We can see scope of each type of food production, processing and trading businesses from the above table that:

- Food production and processing businesses: Northern Mountainous area has 11,143/51,007 businesses, with the highest percentage of 21.85%.
- Food trading businesses: Northern Lowland area has 34,517/161,837 businesses, with the highest percentage of 23.2%.
- Catering service businesses: The Southeast area has 47,508/208,771 businesses, with the highest percentage of 22.8%.

1.3. The real situation of food producing, processing businesses in cities directly under Central Government

Production, processing and trading of food in cities directly under Central Government is very eventful with a large number of businesses to satisfy the increasing catering demand of the people. Through Table 3, we can see the scope and complexity of food management in 5 cities directly under Central Government.

Table 3: Quantity of food producing, processing and trading businesses in cities directly under the Central Government

No.	Area	Total	Producing, processing		Trading		Catering service	
			Quan.	Perc. (%)	Quan.	Per c. (%)	Quan.	Perc. (%)
1	Hanoi	32,641	2,174	6.7	17,592	53.9	12,875	39.4
2	Hai Phong	13,515	1,859	13.8	4,426	32.7	7,230	53.5

3	Da Nang	7,973	673	8.4	1,736	21.8	5,564	69.8
4	HCM City	26,048	2,769	10.6	3,515	13.5	19,764	75.9
5	Can Tho	6,151	455	7.4	2,621	42.6	3,075	50.0
Total		86,328	7,930	9.2	29,890	34.6	48,508	56.2

Comments: Of 5 cities directly under the Central Government, Hanoi has the highest number of 32,641 food businesses, including 17,592 food trading businesses (53.9%), and 12,875 catering service businesses, taking the top and the second leading position all over the country respectively. Catering service businesses in Hanoi mainly concentrate in urban districts, especially Hoan Kiem, Dong Da, Hai Ba Trung. Ho Chi Minh City have high concentration of 2,769 food production businesses; and the highest number of catering service businesses all over the country with 19,764 businesses.

1.4. Characteristics of markets in Vietnam

Goods and products, especially food products in Vietnam are mainly supplied through markets. Markets exist in every communes, districts, and provinces or cities. Markets get a close relation to people's life, and get much traditional culture. These are places of trading of products and goods, especially food products. It can be seen from the investigation survey on actual situation of food safety and hygiene in 10 Hanoi markets in 2007 that:

Table 4.1: Objects of management and ownership of markets in the survey

No.	Contents	Investigation result	
		Quantities	Percentage (%)
1	Management authorities		
	Commune/ward level	1/10	10
	District level	9/10	90
	Province/City level	0	0
2	Ownership		
	State	8/10	80
	Co-operative	1/10	10
	Individual	0	0
	Joint venture, joint operation	1/10	10

We can see that, 9 in 10 markets are under management of district level and 8 in 10 markets under the State ownership.

Table 4.2: Objects of management and ownership of markets in the survey

No.	Contents	Investigation result		
		Quantities	Percentage (%)	Average
1	Trading			
	General trading shop	4,106	100	410,6
	Food trading shop	1,562	38,04	247,4
2	Type of food traded in	1,562	100	156,2

markets			
Meat and its products	364	23.3	36.4
Milk and its products	25	1.6	2.5
Egg and its products	80	5.1	8
Alive and processed aquatic products	104	6.7	10.4
Functional food and additives	26	1.7	2.6
Ice cream, frozen water and instant drinks	243	15.6	24.3
Frozen food	29	1.9	2.9
Instant vegetable	504	32.3	50.4
Soya milk and its products	34	2.2	3.4
General food	128	8.2	12.8

Comments: Food trading shops make up 38.04% of the total number of trading shops in surveyed markets with an average number of 247.4 shops per market. Number of instant vegetable shops makes the highest percentage of 32.3% of the total food trading businesses in the markets with an average number of 50.4 shops in a market, followed by meat and its product trading shops (23.3%), and then instant food and drink shops (15.6%) with an average number of 24.3 shops in a market.

Table 5: Characteristics of food safety and hygiene in markets under the survey

No.	Contents	Investigation result	
		Quantities	Percentage (%)
1	Near pollutants	3/10	30
2	Easy to be flooded in rains	2/10	20
3	Local road made of concrete	10/10	100
4	Sufficient rubbish bin	8/10	80
5	Sufficient pure water systems	10/10	100
6	Independent toilet	9/10	90
7	Separate trading zone	9/10	90
8	Tools for food hygiene	10/10	100
9	Certificate of food safety and hygiene	5/10	50
10	Demand for construction of clean market	10/10	100

Comments: In 10 markets under the survey, 3 of them are placed near pollutants; 2 in 10 markets have roads flooded in rains, 2 of them has insufficient rubbish bin and 5 of them have certificates of food safety and hygiene; and 10 of them have Management Unit expressing the need for construction of clean market for assurance of food safety and hygiene for consumers in markets.

2. Food safety and hygiene assurance in food production, processing and trading businesses

2.1. Food safety and hygiene assurance in food processing

Food safety and hygiene is a specially important issue, directly affecting to the health and life of community and the socio-economic development. To assure the food safety and hygiene during the supply, from farms to meals, the control of safe material sources plays a very important role. In Vietnam, there are still main violations on food safety and hygiene. In details:

- Popular use of unauthorized pesticide in planting vegetables

Our farming branch is in small scale, individual with outdated cultivation and high pollution of environment, so it is difficult to control farming environment, cultivation techniques and use of fertilizers and pesticides, and preliminary treatment and maintenance of agricultural products. In accordance with Ministry of Agriculture and Rural Development (2006), rate of vegetables with residue of pesticides take a high percentage (see Table 6, Table 7).

Table 6: Residue of chemicals in vegetables and fruits

Type of vegetable	Year	Total number of samples	Percentage of sample (%)		
			No residue	Some residue	Residue > MRLs
Colza	2000	279	41.2	54.5	4.3
	2001	264	54.1	41.7	4.2
	2003	102	61.8	25.5	12.7
	2004	72	29.2	63.9	6.9
	2005	108	76.85	12.96	10.18
Spinach	2000	279	67	29.4	3.6
	2001	204	62.5	31.4	6.1
	2003	133	62.7	28.8	8.5
	2004	72	65.3	31.9	2.8
	2005	108	81.48	11.11	7.4
Cabbage	2002	60	46.7	46.7	6.6
Bean	2001	102	29.6	51.5	18.9
	2003	102	42.1	30.4	27.5
	2004	72	51.4	37.5	11.1
Cucumber	2003	60	55	35	10
	2004	78	69.3	26.7	4
Tomato	2004	105	58.1	39	2.9

Comments: Colza is 54,5% in year 2000, 63,9% in year 2004, 12,96% in year 2005. Spinach, 29,4% in year 2000, 31,9% in year 2004, 11,11% in year 2005. Chinese pea, cucumber, tomato in 2004, the number of samples are in excess of the plant protection chemical from 26 – 37%, meanwhile 3 – 11% the residue exceeding permissive limitation. The vegetable protection chemical found the vegetable of Parathyroid occupies 70% of the samples, the rest is Fipronil, Dithocarbamate, some organics and Carbendazim. The vegetable protection chemical which is prohibited on vegetables as Endosulfan.. Methamidophos but we still can find in some vegetable samples. Some cases of food poisoning still happen due to eating some vegetable, which are over polluted vegetable

protection chemical according to the statistic from 2000 – 2006, there have been 113 cases with 2515 infected people, 6 deaths.

According to the investigation data of Vegetable Protection Department in 2005 shows that the redundant vegetable protection chemical should be concerned in all kinds of fruit. Therefore, we have not found the samples exceeding the permissive limitation. The domestic fruit samples (green orange, orange, mango) also found the residue of vegetable protection chemical but not exceeding MRLs. The plant protection chemical found in the samples of Ha Giang orange is 2,4D with the residue from 0,01 to 0,01 mg/kg. The samples of grape found the residue MRLs is 20%, and 45.8% of the samples of Chinese apple and pear found the residue of Preservation medicine Carbendazim.

Table 7: The residue plant protection chemical in fruit

Fruit	Total of samples	Sample rate (%)		
		Non residue in vegetable protection chemical	Residue vegetable protection chemical	Residue vegetable protection chemical >MRLs
Orange (from the South and Ha Giang)	20	25,0	75,0	-
Grape	20	0	80,0	20,0
Mango	20	40,0	60,0	-
Total	60	30,9	64,3	4,8

The reasons for residue of vegetable protection chemical in fruit is to:

+ *Planning work of production zone:* Up to now, since the shortage of finance, technicians, unreasonable geographic conditions, many localities have not planned the land for growing safety vegetables. Vegetable growing land has not analysis. At present, every 12% of vegetable growing land is near the industrial park, road, and hospital.

+ *The management, using of plant protection chemical:* Every year, the Ministry of Agriculture and Rural Development issues and regulates the list of vegetable protection chemical for the vegetables but some places are arbitrary to use the prohibited or use limited chemical pesticide for spraying vegetable as Monitor. The other plant protection chemical origins from biology have not been used widely. The volume of vegetable protection chemical and the numbers of spraying are still high such as spinach 2 – 5 times/crop or brood or the Chinese pea 8 – 15 times, Rau ngot (green vegetable) 1 – 4 times, turnip 3 – 4 times, tomato 3 – 10 times, cabbage 8 – 12 times, bitter melon 6 – 7 times, cucumber 6 – 10 times, watermelon 6 – 15 times, lettuce 3 – 4 times, cauliflower 7 – 8 times, chilly 4 – 5 times, amaranth and the time for isolation almost do not follow the instruction.

+ *Inspection, overseeing the residue of plant protection chemical in fruit and vegetable:* Some provinces have implemented taking the samples for checking microorganism pollution and the residue of poisoning chemical so it has the warning effect for the producers about the poison from the vegetable which has

not assured the food safety and hygiene. Therefore, the content has not implemented regularly, the numbers of samples examined are a few so it reflects the status of producing safety vegetable incomprehensively and fully now. The system of inspection, overseeing from the Central to local has not formed comprehensively, unclear mechanism of operation, little finance of inspection, overseeing, microorganism pollution analysis and the residue poisoning chemical in agricultural products, no allocation of expenditure in many localities.

+ *The awareness of farmers:* The Ministry of Agriculture and Rural Development has assigned the encouraging agricultural expansion plant production body to held hundreds of training classes of safety vegetation growing, propagandize in many forms but the change in awareness is still low. The use of vegetable protection chemical, which does not follow the instruction and time of isolation, and abuse vegetable protection chemical are still the insolvable problem in many areas. According to the investigation data, more than 70% of farmers spraying vegetable protection chemical 8 –12 times per vegetable crop, 70 – 80 times for grape crop. Only 22,54% of the farmers questioned keep the correct time of isolation after spraying. The abuse of vegetable protection chemical leaves the residue of vegetable protection chemical in food product.

- *The prohibited use of antibiotic, gaining weight drug, maturity stimulation drug in raising cattle, poultry, and aquatic products*

It is almost to get no control on the raising in households, specially on the cattle feed, weight gaining drug and the slaughter of cattle, poultry, aquatic product so the rate of microorganism pollution samples are still high. The status of containing impurities and antibiotic residue, chemical in aquatic product still are still popular. The cases of food poisoning by the aquatic product are still popular, according to the statistic in 2000 – 2006; there were 271 cases of food poisoning to 5.230 people contracted disease and 141 people died. Aquatic raising also has not controlled the raising zone, preliminary treatment process, and aquatic transfer. The status of containing impurities and antibiotic residue, chemical in aquatic product exists popularly, affects export and domestic consumption.

- *The meat supplying to production, processing, and business bases is unsafe since the cattle, poultry slaughtering bases do not meet the hygiene conditions:*

According to the report of Ministry of Agriculture and Rural Development (2006), there were 64,5% of animal slaughtering bases located in residential area, 35,5% in markets, meanwhile 67,7% of gathering cattle slaughtering bases have veterinary control and 27% of poultry slaughtering bases have veterinary control. The area of bases is very narrow with more 88% of slaughtering bases having the area less than 20m², only 0,6% of slaughtering bases having the area of more than 50 – 200m², no standard cattle slaughtering base, over 90% of bases slaughtering cattle on the floor, 10% of ones slaughtering cattle on the pedestal. Only 45% of slaughtering bases implement antidotal hygiene before and after slaughtering, 55% of ones implement regular antidotal hygiene. Therefore, the rate of microorganism pollution samples occupies 57%.

Besides, most of animals are transferred from slaughtering bases to retail places by primitive means such as motorbikes, pedicabs and no special equipment assuring the hygiene when transferring. The latest survey data shows that only

17% of slaughtering bases have the special transferring equipment as buckets, 83% of ones do not have good conditions when transferring the food products.

- Violation during food processing

In our country, food processing is mainly from households, individuals (occupying 85,6%). The condition of safety food hygiene in households, especially in craft villages the rate of failing to reach requirement up to 86,7%, mainly from the material facilities and human. Specially, the status of food processing in collective kitchens, street foodservices violates seriously the conditions of food hygiene:

- + The rate of people processing and dividing food by hands: 67,3%
- + The rate of people processing without washing hands: 46,1%
- + The rate of people processing's hands acquired E.Coli (dung contaminated): 50 - 90%, depend on each local.
- + The rate of pie, grilled chopped meat using borax occupying 30 – 70%

- The violation in selling food in market

+ According to the Ordinance on food safety and hygiene, food business is conditioned business, the food under 10 groups of high risk must be certificated for having sufficient conditions of food safety and hygiene. Actually, the food business in market has almost been floating so far. At the present, Ha Noi has more than 300 licenses for street food service bases; meanwhile, Ha Noi has about 17.000 street food service bases. Da Lat city has granted 300 licenses for street food service bases. The remaining provinces and cities almost have not implemented.

+ Food and addictive business in markets is also floating. Many kinds of additive outside the permitted list, unclear origin of additive, smuggled additive are sold in public in Kim Bien market in Ho Chi Minh. The press has mentioned so many times about Kim Lien market but the board of management as well as the local authority almost has no method of controlling the additive business in market. The other markets in the whole nation have not managed the additive. As the regulations, the board of management in all markets just allows to sell additive that have safe origin but none of them follows the regulation. Many products of poultry, fruit, confectionary, additive is sold freely. In some markets, hundreds of borax will be met in short time when asking.

+ Imitation goods, smuggled goods, poor quality goods are very popular. According to the report of Department of market control (2006) showed that: low quality imitated food has been very high for several past years, most of them are imitated alcohol, imitated season, expired goods, bad confectionery (see appendix).

Some methods need applying to control tightly the source of input material including:

- Issuing full legal documents of specifying the detail standards toward each material; application standards to cattle, poultry slaughtering bases and animal preliminary process.
- Strengthening the state management, especially in executive committee of party hierarchy and local authority having material sources.
- Raising the awareness of farmers, helping the producers define the benefit and importance of the food safety and hygiene for food material.

2.2. The assurance of food safety and hygiene in food process

Food production, process and business are the operation of conditioned production, process and business specified synchronously in laws but the implementation has still been insufficient so far. By the year 2006, Viet Nam law system formed the legal lobby to inspect the food safety and hygiene from “farm to dining – table” and at the first step, the system of science reasoning are built for the management of food safety and hygiene in Viet Nam that are harmonious with the region and global. The law system of food safety and hygiene has had 259 documents up to now at Government level, ministry level, sector level. Therefore, with the present requirement, it is necessary to issue food law in Viet Nam to have sufficient legal power in order to control food in Viet Nam. The critical legal documents are to:

- The Ordinance on food safety and hygiene in 2003
- Circular 163/2004/ND – CP instructs the execution in 2004
- Inter-ministry circulars such as: Medical – Agriculture, Medical – Aquaculture, Medical – Industry, Medical – Trade, Medical – Information and Culture.

Thanks to these documents, food producers and businessmen have had guides and standard for operation, management office have had legal lobby to maintain the activities of food production, business and standards for examination, inspection as well as the belief for consumers. Meanwhile, the management assignment of food safety and hygiene of Ministerial sectors and authorities shall be more concrete, suitable to the regional and international circular.

- The Ministry of Public Health and other related ministries and sectors have promulgated many detail instructions of Ordinance and Decree of the Government in the field that the Ministry manages from domestic food and imported food, from food business to food consumption also have the regulations of food safety and hygiene.

- Viet Nam government has promulgated national action plan to assure the food safety and hygiene up to year 2010 (Decree 43/2006/QD TTG dated 20/02/2006), meanwhile the determination of target and solution for operation of food safety and hygiene in our country to get the safe food market for domestic consumption and export.

- Since Viet Nam has just established the management system of food safety and hygiene so it lacks the management experience. Therefore, many models on food safety and hygiene have been built to withdraw experience and set up regulations, standards for management work as the Ministry of Agriculture and Rural Development has issued the model of safe vegetable growing, The Ministry of Public Health has set up the model of poisoning prevention by globefish in Binh Thuan, the model of community communication, the construction of healthy cultural life, food poisoning prevention in 9 provinces and the model of street food safety and hygiene in 8 critical cities (Ha Noi, Hai Phong, Ha Long, Hue, Da Nang, Da Lat, Vung Tau and Ho Chi Minh city). The Ministry of Public Health has co-ordinated the Ministry of Science and Technology and The Ministry of Industry to build the model of advanced management system HACCP. Until now, more than 200 enterprises (excluding aquatic ones) have applied HACCP.

- In the management work, the safe management of food products is also important. The Ministry of Public Health constantly researches, checks, amends the regulations of product management to be more suitable to legal regulations

and international rules as the announcement of product standard, imported food control, notorious food management. 21,899 products under 17 food groups and 2,400 notorious products have released the standards from 2001 to 2006. To the imported food, 9 companies have been suspected and 3 state inspection companies are appraising the imported food in nationwide scale for imported food business bases.

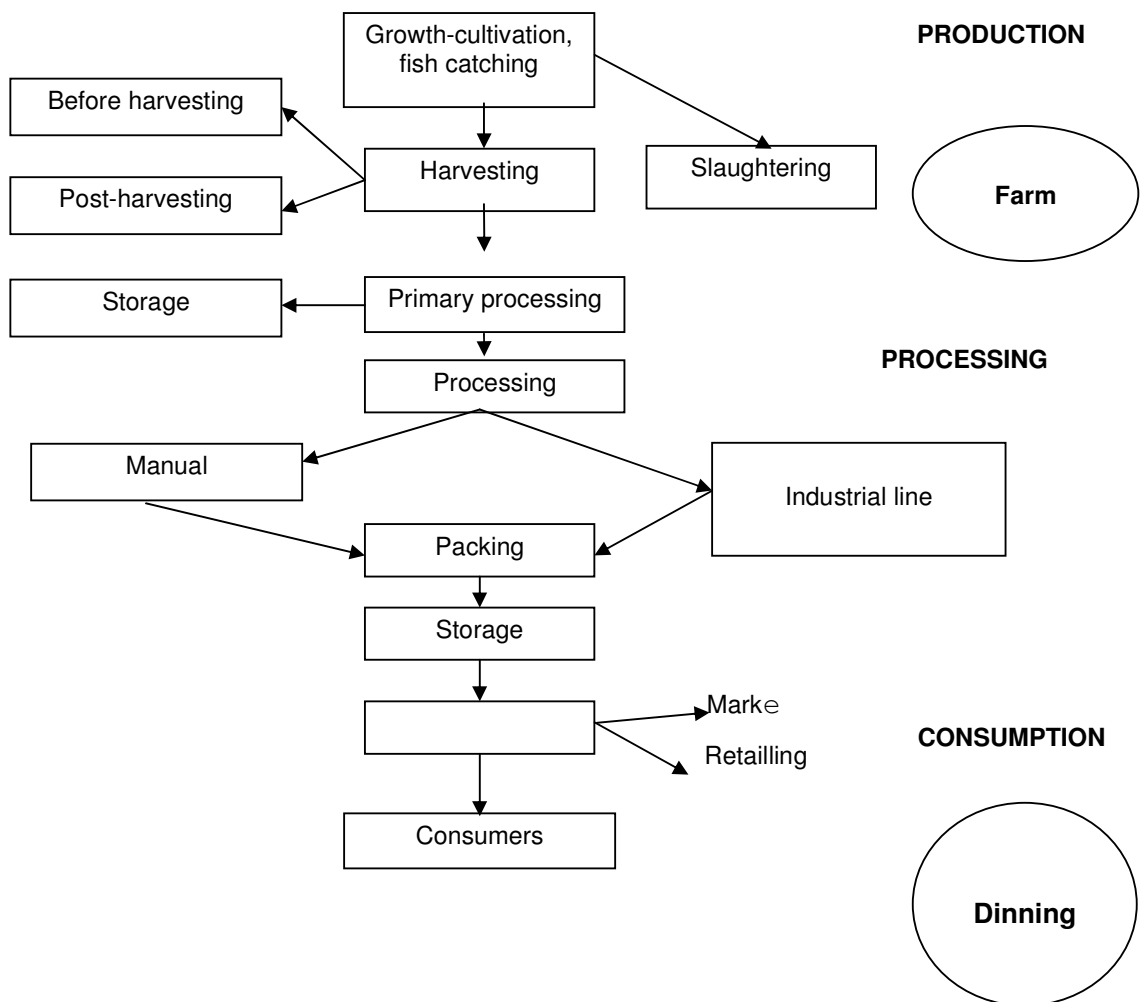
According to the Ordinance of food safety and hygiene, food business is conditioned business (Article 4, Ordinance of food safety and hygiene). The Article 4 of Decree 163/2004/ND-CP determines 3 condition groups of food safety and hygiene to assure food production, business safely. The Article 4 of Decree 163/2004/ND-CP regulates 10 groups of food needing the license of food safety and hygiene and Article 15 and Article 16 stipulating power to granting license. The list of 10 groups of food with high risks, including:

- *Meat and its products*
- *Milk and its products*
- *Egg and its products*
- *Processed aquatic products*
- *Ice-creams, ice water and natural water*
- *Functional food, enhanced food, nutritional food, additional food, food additive*
- *Processed food and drink*
- *Frozen food*
- *Soya milk and its products.*
- *Kinds of instant fresh vegetable, bulb, fruit*

These regulations in the Ordinances and Decrees are fully suitable to the international ones. However, the foreign countries like USA, China, Japan, Taiwan etc. implement the license issuance more strictly, consequently all enterprises, which produce and/or deal in food, have to attain license. In Vietnam, there have only ten high-risk groups of been regulated. But, the development is carried out only in some export businesses of the aquaculture branch and some local businesses. Many businesses in operation, which serve cooperative meals, have not been issued permit. This leads to food poisoning in series as in Ho Chi Minh City, Binh Duong, Da Nang, Quang Nam...

There are various products of various technology procedures and equipment in each group of food, of which the criteria continuously develop and increase. The problem is that the procedure applied by each business has to ensure the suitability, effectiveness for each group of specific products. The procedure that generally illustrates the food processing process is as in Diagram 1.

Diagram 1: Chain of food supplied to customers



Basically, the production technology process and food processing includes following steps: *raw materials obtaining, preliminary treatment, processing (manual, technology chain), packing, preserving and allocating to consumers.* Government's regulation related to Food safety with aim to control all potential dangers, which affect the food consumers' safety during the above food supply

chain. It may be affirmed that the system of normative act documents relating to the food safety is relatively adequate, meeting the above-mentioned issue. There are compulsory constraints for each section.

+ For raw materials:

All kinds of raw material shall be controlled, or by eyes, or by fast testing, or sampling for carrying out chemico-biological tests to ensure that the input raw materials did not contain toxics such as pesticide, weighting increase drug, growth excitation drug, antibiotic. The raw materials exported have to be fresh, uncrushed, rotten, non-degenerate, uncontaminated, free of toxics or contaminated with toxics, free of pathogenic parasite, or over-limit number of microorganism. The State strictly forbid the use of domestic fowls and animals, aquatic products, which died due to disease, poisoning or unclear reason, to be raw materials for food processing. There is a method to ensure the producers' safety that raw materials should be supplied by prestigious planters, breeders, who well apply the Good Agricultural Practices (GAP) or Safe Vegetable Production Practices... The producers have to require the raw material suppliers to undertake that the raw materials were safe and with the required quality.

+ For primary treatment:

The main purpose of this link is to eliminate auxiliary parts before processing foods. The link includes peeling, scaling, removal of shrimp heads after pre-processing... Then, foods will be washed before being processed. After processing, if the demand on processing is not too high, the fresh foods such as meat, fish will be stored at -18°C in freezing tank. All physical dangers (sand, stone, grit, hair, and metal piece), chemical dangers (residual of antiseptic agent, Chloramin water...) and biological dangers (parasite, pathogenic parasite) need be determined and controlled timely.

+ Processing:

This link play a very important role since finished products will be formed after processing. The generated products, depending on each processing procedure, will have various characters on the state of sense organs such as color, taste, and structure status. In any case, the business, while applying processing procedure, has to meet the lawful rules on the food safety. The laws permit the use of the additives, supporting agents, nutritious macro-substances in the permission list, and the use thereof shall be in accordance with the specified dosage and limit. The equipment used in the processing procedure, which directly contact with the foods, shall be manufactured by specified materials in such a manner not to contaminate foods. They must be suitably located, easy to assemble and disassemble to create favorable conditions for the cleanness after each shift. The processing procedure must comply with the *one-way principle*; this means the food from input raw material to finished product should be on a straight line to avoid cross-contamination between contaminated products and the clean ones. The workers, who directly take part in the processing, have to be equipped with knowledge on the food safety and medically examined before recruitment and periodically as regulated.

+ For packing:

All packs for foods shall comply with the requirement on the food safety, which may protect foods against pollution and ensure the foods' quality within the storage period and use period. They must be convenient for the labeling. The packs that directly contact with foods must be tested and inspected for chemical, physical, microbiological properties to ensure the food safety before use.

+ For storage:

After processing, the finished products, if not marketed, must be stored with the areas, specialized tools and equipment for foods such as refrigerator, cooling cabinet, and cooling store. The storing areas shall be equipped with thermometer, hygrometer to monitor the inner temperature, moisture, with equipment to effectively protect against harmful animals. Goods in stores need be tidily arranged, located 20 – 30 cm from wall on specialized shelves or brackets. The goods output must be in compliance with FIFO (first in first out) method and goods must be controlled by delivery orders.

+ For distribution:

The delivery of finished food products to the consumers need be through distribution system from business to selling marketplace such as markets, shops, supermarkets, retailers. The goods distribution need meet the requirements as follows: using only specialized equipment to transport foods, keeping foods free of contamination, covering and packing foods in a safe way, keeping suitable temperature for each kind of foods during transportation in such a manner remain the foods properties and ensure the specified transportation period. The assurance of the food safety during processing, production, trading, circulation and distribution need be based on the characters of technical methods, the requirements on the food safety applied for each section of the production procedure.

2.3. Major issues the foods processing step in Vietnam

More than 70% of foods in Vietnam are manually processed by households and individuals. Therefore, the rate of violation of regulations on the food safety in the food production and processing businesses is very high and at various levels:

+ Slaughtering: The slaughtering of domestic fowls and animals has attained 15% only; this rate is only 2.5% in the Northern provinces (the slaughtering is mainly carried out manually and does not be informed to the veterinary hygiene agency). After slaughtering, the hauling and storage almost do not meet the requirements on the food safety. The veterinary control to the concentrative slaughtering bases reaches 67.7% only. The control almost does not cover the slaughtering of the individual bases and the households. The veterinary control covers only 27% of slaughtering bases.

+ Street food processing bases: The street food processing and service bases is increasingly grow in the quality and size in all provinces and cities, districts, and communes and wards of the country, particularly in the centers, towns and cities. The rate of food poisoning caused by this type of bases is relatively high. There are many food poisoning cases caused by the foods like ice-cream, bread, glutinous rice cake... from the street vendors that have resulted in many deaths. The eating and drinking services boom in the tourism and festival areas, resulting in environmental pollution, affecting the culture and landscape, particularly food

poisoning and diseases transmitted through food way to the consumers. In almost towns, the people's committee of levels does not really take care of the management of street food services, consequently there are dangers not only to the people health but to the town civilization, traffic safety. Especially, the management units of the food bases have not fully completed their responsibilities; they even ignore the violations on the food safety.

+ The food processing in the individual bases and households is an outstanding problem. The use of borax, coloring and toxic preservative is rather popular, which contain the potential dangers to the community health, threatening the population life. The check result of the year 2006 in localities has shown that the rate of pork pies containing borax was very high, making up 29 to 82% of tested samples, the rate of vermicelli containing borax made up 17-24%, rate of rice noodle containing formol is still high. The production of imitate alcohol, medical alcohol, traditional alcohol... tends to increase. This popular violation has caused tens of food poisoning cases, leading tens of deaths per year. The production bases of bottled drink, purified water, mineral water boom everywhere. The untimely standardization of types of drink as well as confectionary, alcohol, beer in the market is really danger to the community health, to the population life.

2.4. Knowledge, attitude and practice of object groups on food safety

The knowledge, attitude and practice of object groups on the food safety are very important in the assurance of the food safety of the production, processing, trading-in and use of foods. As the survey result, the knowledge, attitude and practice of object groups on food safety is still limited, leading the serious poisoning situation – an outstanding issue. The survey result of the year 2005 has shown that:

- For the managers, leaders: They are the persons, who direct, organize and manage the activities of the food safety. However, the survey results have shown that the consideration and direction of the persons responsible for the food safety have made up 96% in provincial level, 82% in district level and 40% in communal level only.

- For the food producers, processors: They directly take part in the food production, processing process. The survey results of the samples taken in the year 2005 have shown that the rate of the persons, who have enough knowledge on the food safety, is only 47.8%. Thus, the remaining 52.2% have not enough knowledge on the food safety.

- For food dealers – food sellers for profits: The survey results of the year 2005 have shown that the rate of the persons, who have enough knowledge on the food safety, is only 38.6%. Thus, the remaining 61.4% have not enough knowledge on the food safety.

- For food users: The rate of the persons, who have enough knowledge on the food safety, is only 38.3%. Thus, the remaining 61.7% have not enough knowledge on the food safety.

2.5. System of normative acts relating to the food safety

It may be said that the legal corridor to control the food safety “from farm to dining table” have been basically completed in the year 2006. And, the scientific theory system for the food safety management in Vietnam has been integrated with the regional and international one. Up to now, January 2008, there have

been 259 documents adjusting the activities relating to the field of the food safety in Vietnam.

However, it is seriously necessary to promulgate Laws on Foods to have enough strength to control the foods in Vietnam. The List of some normative acts relating to Vietnamese food safety during food production, processing and trading is as follows (Table 8).

Table 8: Some normative acts on food safety

No.	Ref. number	Date of issuance	Subject
I. General documents			
1	05/2007/QH12	21/11/2007	Laws on Goods quality
2	05/2005/QH11	14/06/2005	Laws on Trade
3	18/1999/PL-UBTVQH10	24/12/1999	Ordinance on Goods quality
4	12/2003/PL-UBTVQH11	26/07/2003	Ordinance on Food Safety
5	57/CP	31/05/1997	Regulation on Penalty for administrative violation in measurement and quality management of goods
6	163/2004/ND-CP	07/09/2004	Regulation in details of some clauses of Ordinance on Food Safety
7	175/2004/ND-CP	10/10/2004	Penalty for administrative violation in trading
8	179/2004/ND-CP	21/10/2004	Regulation on state's management for quality of products and goods
9	12/2006/ND-CP	23/01/2007	Regulation in details of implementation of Laws on Trade for international selling and purchasing and operations of selling and purchasing agencies and goods transit
II. Documents regulating conditions of material basis, equipment			
1	12/2003/PL-UBTVQH 11	26/07/2003	Ordinance on Food Safety
2	163/2004/ND-CP	07/09/2004	Regulation in details of some clauses of Ordinance on Food Safety
3	4128/2001/QD-BYT	03/10/2001	Regulation on conditions to ensure food safety in cooperative canteens and food processing and trading bases

4	3199/2000/QD-BYT	11/09/2000	Standards for bases to meet street food safety
5	4128/2001/QD-BYT	03/10/2001	Regulation on conditions to ensure food safety for cooperative canteens and processed food bases
6	2244/2002/QD-BYT	13/08/2002	Regulation on hygiene and safety conditions for meat and meat-product processing bases
7	4282/2004/QD-BYT	01/12/2004	Regulation on hygiene and safety conditions for milk and milky product processing bases
8	01/2005/QD-BYT	07/01/2005	Regulation on hygiene and safety conditions for soft drink processing bases
9	11/2006/QD-BYT	09/03/2006	Regulation of issuance of certificate for the high-risk food processing and trading bases which have enough conditions on food safety
10	39/2005/QD-BYT	28/11/2005	Regulation of general hygiene conditions for food production bases
11	41/2005/QD-BYT	08/12/2005	Regulation of conditions on food safety for food and drink trading, service bases
III. Documents regulating human conditions			
1	12/2003/PL-UBTVQH 11	26/07/2003	Ordinance on Food Safety
2	163/2004/ND-CP	07/09/2004	Regulation in details of some clauses of Ordinance on Food Safety
3	11/2006/QD-BYT	09/3/2006	Regulation of issuance of certificate for the high-risk food processing and trading bases which have enough conditions on food safety
4	43/2005/QD-BYT	20/12/2005	Regulation of knowledge about food safety for persons directly producing and trading food

3. Orientation, solution to meet food safety in food production, processing and trading in Vietnam for period 2010 – 2025

3.1. Orientation and general solution to meet food safety in Vietnam

In order to settle the outstanding matters on the food safety, the general solution is to strengthen the administrative machinery, to intensify the effect the State's management function of the administrative machinery. This solution need be given the first priority from the Center to localities. To do so, both human resources and material resources have to be adequately prepared to meet the present urgent requirements. Particularly:

(1) Soon promulgate Laws on Food Safety instead of Ordinance on Food Safety No. 12/2003/PL-UBTVQH11 dated 7/8/2003 to support the state management activities in the field of food safety.

(2) Strengthen administrative machinery from the Center to localities, construct organization project at four levels (central – provincial/city – district – communal/ward).

(3) Constitute specific integrative and synchronous inspection system at three levels (central – provincial/city – district).

(4) Constitute food testing system, which is integrative and enough strong nationwide at four levels (central – provincial/city – district – communal/ward).

All the above solutions aim to improve the state management effect of the administrative machinery, operation of organ of the administrative machinery to ensure food safety. At present, the Food Safety Department is cooperating with the related bureaus, departments in and out of Ministry of Health to implement the above solutions as directed.

3.2. Orientation, solution for food safety in food production, processing and trading in Vietnam to the year 2010

3.2.1. Reinforce of state management capacity and construct effective management organization system of food safety from Center to localities

3.2.1.1. Organize the branch to ensure food safety

- Construct responsible state organization and management project on food safety from the Center to localities (3 levels: central – provincial/city – district) with minimum number of staff suitable to the reality and meet the task requirements in the new situation.

+ Strengthen food safety management agency in Ministry of health and concern ministries, branches. Construct food safety management organization system in provincial and district levels.

+ Constitute inspection system specialized on food safety at three levels: central – provincial/city – district. In the short term, the tasks on food safety inspection are assigned to local inter-branch inspection agencies (medical inspection, veterinary inspection, aquaculture inspection, vegetation protection... agencies).

+ Construct, develop network of collaborators on food safety at communal/ward level.

- Based on the central inter-branch direction committee on food safety (as in Decision No. 48/2005/CT-TTg dated 08/3/2005), including its members being leaders' representative of ministries, branches such as: Ministry of Health, Ministry of Agriculture and Rural Development, Ministry of Aquaculture, Ministry of Industry, Ministry of Trade, Ministry of Science and Technology..., Inter-branch direction committee has been established in 100% of provinces/cities, district and commune/ward nationwide.

3.2.1.2. Manage food safety in food production, processing and trading field

- Promulgate regulations on operation and implementation of food safety management regime, function suitable to each ministry, branch; integrate cooperation in management to avoid overlapping, implement decentralized state administration in production, trading and service fields; quickly input Ordinance on food safety into the life.

+ Agricultural materials: pesticide, veterinary drug, veterinary hygiene in breeding, fertilizer, biological work, cattle food...

- + Agricultural products: procedures and standards for safety and clean agricultural products.

- + Regulation on conditions of food production, processing and trading bases, food transportation means, food hygiene conditions.

- + Amend, supplement and promulgate new documents suitable to the new period.

To the year 2010, basically complete legal documentary system on food safety management in production, processing, storage and trading links.

- + Basically complete the system of quality standards for food safety to be step by step integrated with the international standards, meeting the route of international economic integration.

- + Construct food standards: basic standard, trial standard, term standard, product standard, procedure standard, appropriate standard, standard on properties list in tendency of integration and in accordance with CODEX's standard.

- + Promulgate norms on food safety, certificate – accept – recognize.

- Apply the international advanced methods on quality management of food safety, particularly:

- + Carry out basic hygiene program to ensure production conditions in food production and breeding bases: GMP, GHP, and GAP.

- + Carry out the Harm Analysis and Critical Point Control Program (HACCP) for high-risk food production bases.

- Promulgate suitable policies

- + Construct plan to ensure national food safety for each period; Plan and expand areas for fresh foods, raw material of specific cultivation to supply fresh and safety foods, particularly vegetable, fruit, tee, coffee, meat, and fish...

- + Issue policies to support small-sized production and processing bases and households of the trading villages.

- + Improve food safety in cooperative canteens of industrial enterprises, hospitals, schools...

- Study, propose amendments, supplementations to complete the sanctions for the acts violating regulations on food safety, from the breeding and farming, production, processing, storage, and trading stages.

- Remain checking activities, certificate conditions on the safety conditions of the production, processing, and trading bases.

3.2.2. Accelerate the communication and broadcasting education on food safety in production, processing, and trading fields

The broadcasting education is the directive motto in the food safety work. Therefore, it is necessary to have strategies on communication – education – propaganda on food safety.

- In order to effectively the broadcasting activities, the objects are divided into groups to constitute suitable content of the messages, including leaders, producers – planters – breeders – processors p – dealers, consumers, participants of broadcasting.

- Mobilize communication channels.

Direct channel:

- + Reinforce direct communication through basic communication teams of ministries, branches to give the communication content on food safety to each group of objects under the observation and management of the relating ministries, branches such as Ministry of Health, Ministry of Education and Training, Ministry of Culture and Communication, Ministry of Agriculture and Rural Development, Ministry of Aquaculture, Ministry of Trade, Ministry of Police, Ministry of National Defense.

- + Carry out direct communication through public unions, politic – social organizations: It is necessary to concentrate to each object of each union and organization to speed up the quality assurance of food safety such as Association of Farmers, Association of Women...

- + Domestically and internationally train.

Public channel:

- + Radio and television: Clearly determine characters, demands of admass; construct messages on food safety, standards for recording cassette and video tapes with propaganda contents to popularize at bases through speaker system of communes, wards and video tapes projecting network.

- + Press: Determine characters, demands on information, and favorable genre of readers to build the suitable contents.

- + Other communication channels: stage, education in schools, advertising, festival of competition, exhibition, fair, seminar, workshop, consulting at public areas...

- Mobilize communication forces:

- + Mobilize and use the effect of the food safety

- + Reinforce communication on food safety on the public media, aiming to change the food safety knowledge of the leaders of levels, the public and groups of objects.

- + Socialize education, broadcasting on food safety; develop team of food safety propagandists of ministries, branches, bases.

- Supply communication products and equipment in food production, processing and trading fields.

- + Communication products: records, figures, posters, books, magazines...

- + Communication equipment: videos, televisions...

- + Traffic means for mobile propaganda team: cars, motorbikes.

- Apply informatics technology in quality management of food safety: In the short term, apply informatics technology in the controlling imports and monitoring food poisoning.

3.2.3. Reinforce inter-branch activities to ensure food safety in food production, processing and trading fields.

3.2.3.1. Mobilize concern branches taking part in food supply chain to be responsible for assurance of safety of food under their management

- Strengthen the combination the ministries of health, agriculture, aquaculture, industry, trade, environment, education, information and culture, police, justice... in the control activities of food safety for the whole food supply chain.

- Mobilize participation of government of levels, community, social - politic organizations, public unions, and individuals in the assurance of food safety to

socialize this work step by step; construct the model of community taking part in management of food safety within area.

- Reinforce and issues policies to support associations of food production and processing in the supervision of food safety.
- Combine inter-branch and local people committees to construct point models of food safety assurance; construct areas for safety food production.

3.2.3.2. Establish inter-branch in food safety management

This is a combination relationship between ministries of Health, Ministry of Education and Training, Ministry of Culture and Communication, Ministry of Agriculture and Rural Development, Ministry of Aquaculture, Ministry of Trade, Ministry of Education and Training, Ministry of Police, Ministry of Culture and Information, Ministry of Police, Ministry of Justice... in the following activities:

- Educate knowledge on food safety through propaganda: to organize propaganda, education, credit issuance, and training of knowledge on food safety to the objects under branch's management in combination with inter-branch participation; compose propaganda documents, train general knowledge for integrative use in the whole country.
- Check and inspect the implementation of projects, programs, plans on food safety: Plan annual and inter-branch combination to deploy; organize inter-branch inspection delegations, particularly in rush times such as Action Month, Mid-autumn, and New Year festival.
- Closely combine in recognition, certification of quality control system relating to food safety.
- Apply quality control systems relating to food safety such as GMP, GHP, GAP, and HACCP in consulting, training, practice direction and supervision activities at the bases.
- Develop scientific research topics on food safety.
- Settle issues arisen in the food safety management process.

3.2.3.3. Establish a Consultant Committee on food production, processing and trading

Manage foods making gene changes: radiation food; food additive, functional foods, food packing upon requirement of management authorities.

3.2.4. Accelerate check, inspection of implementation of normative acts on food safety in food production, processing and trading field

3.2.4.1. Construct and develop inspection system specialized in food safety

- Construct project on inspection organization system specialized in food safety in the medical branch form the Ministry to Departments to Bases with adequate number of inspectors.
- Organize training specific inspectors in food safety.
- Constitute Charter of inspection and testing of food safety.

3.2.4.2. Construct inspection plan, reinforce organization of testing and inspection delegations subject to each subject and each group of high-risk foods

- Ministry of Health is the clue to combine provincial people committees and ministries, branches, directs branches, unions form the central to local, organizes inter-branch or specific testing delegations on food safety at food production,

processing and trading bases, particularly for high-risk foods at the time when the consumption demand increases (New Year festival, Mid-autumn, wedding season...) and at the time when the digestive epidemic relating to food safety occurs.

- Check safety of raw material sources for food production to reduce the rate of biological pollution and residual of toxic chemicals in agricultural products, foods. Periodically sample raw material to analyze and evaluate. . Combine with trade branch and concern branches to control the circulation and use of pesticide, veterinary drug, fertilizer, cattle food...

- Implement unexpected checks to check the conformity with the lawful regulations on food safety and safety conditions in the production, processing and trading bases, the hygiene of direct producers, processors and dealers, food advertising, the rules on labeling, false products, sub-standard products...

- Along with inter-branch testing and inspection, it is necessary to frequently monitor at the bases, particularly the food safety assurance.

3.2.4.3. Maintain periodical check and inspection on food safety from the Center to localities

- Annually, the state management agency combines or gives advice to people committee of levels to usually carry out the check, inspection and settlement of food safety violation.

- + In "Month to act for quality of food safety".

- + Check street food safety.

- + Control quality of food safety of marketed foods.

- + Periodically check food safety at production, processing and trading bases as decentralized by Ministry of Health.

- + Check implementation of lawful regulations of functional food production and trading bases.

- + Check food additive production and trading bases, traditional food production bases.

- Authorized state management decentralized agency periodically inspects and speed up periodical inspection of food quality and safety as regulated.

- For the vegetation foods (vegetable, fruit, and bulb) circulating on the market: Strengthen combination between health agencies, vegetation protection agencies and market management units to carry out usual check on food origin, using fast testing method, to recover toxic residual in foods.

3.2.4.4. Control imported foods and materials for agricultural and aquaculture production

- The agricultural branch combines with customs branch to carry out some imported foods and materials for agricultural and aquaculture production.

- + Carry out quarantine and safety for live animals and vegetations, food products having origin from animals and vegetations.

- + State check on goods quality for drugs, raw materials for production of pesticide, veterinary drug, additive, cattle food, fertilizer.

Aquaculture branch combines with customs branch to:

- + Carry out quarantine and safety for aquaculture products and animals.

- + Inspect quality of food, veterinary drug, chemical, biological product, food materials, substance of environmental treatment in aquatic raising.

- Public health service.

+ Combine with the Custom to take the state inspection about the implementation of food safety and hygiene to the materials used in processing food, additive, the supporting substance for food processing, processed food sterilized at high temperature, functional food, the food replacing breast milk, high risky food.

+ Control the safety of imported food after announcement (dossier inspection, examining the analyzing samples in analyzing room): co-coordinating the related industry and local authority.

+ Combine with the border soldiers, related branches in localities having border gate, increasing the inspection of food safety circulating in Vietnam through border gates, specially small roads.

3.2.4.5. Further co-ordination with professional offices to investigate the reason, violation treatment on the regulation of food safety due to food poisoning

- Public health has presided over and co-ordinate with the agricultural industry to verify the origin of agriculture products, food, aquatic industry, industrial products.

- In addition to the violation treatment of food safety and hygiene as the regulation of the law, the branches shall have plan to support, help the bases violating the technique and management to improve the status of food safety and hygiene. Striving to year 2010, improving one step the failure to reach quality of food safety and hygiene and the numbers of production, processing, business bases shall gradually increase to assure the quality of food safety and hygiene as the regulations of law.

3.2.5. Establishment and development of analyzing system of food safety and hygiene in ministries, branches and whole nation in the field of food production, processing, business

3.2.5.1. Planning and development of the analyzing system of food safety and hygiene in the field of food production, processing, business

- Organizing, evaluating the capacity, arranging the testing rooms in ministries, branches, localities based on the evaluation criterion. Building the system of analyzing national room on food safety and hygiene according to the analyzing criterion group based on the actual capacity of each analyzing room.

- Building the Institute for analyzing the national food safety and hygiene and 4 Center for regional food safety and hygiene.

- Mobilizing and utilizing the strength of the system of testing rooms on food safety and hygiene in ministries, branches from the Central to localities, enterprises or individuals, universities, institutes participating in the inspection, overseeing the food safety hygiene.

- Upgrading the analyzing equipment of testing rooms on food safety and hygiene from the Central (ministries, branches), regions, provinces, cities and organizations to operate the analyzing room in accordance with GLP.

- Building the process for norm of united analyzing technique for each criterion of food safety and hygiene.

- Training the food safety and hygiene analyzing staff: co-operating professional Institute, universities and college under each branch.

+ Training the technician of food safety and hygiene analyze, especially specialization up to analysis fields.

+ Retraining the food safety hygiene analysis for network analyzing staffs and practicing the new analyzing technique (granting certificate).

3.2.5.2. Standardization of analyzing department on the quality of food safety and hygiene in accordance with GLP and ISO/ IEC 17025

- All food testing rooms at Central by the year 2007, all food safety and hygiene testing rooms at regions, provinces, cities are striving to reach the standard of ISO/IEC 17025.

3.2.5.3. Research producing the equipment of quick test and equipment for routes and inspection units to evaluate and select the quality of food safety and hygiene

- Striving to equip fully quick test to communes, wards by the year 2010 and gradually researching for producing quick test equipment to meet the demand of branch.

3.2.6. Controlling the food pollution, food poisoning, and diseases passed through food

- Establishing the program of testing the risks causing food pollution. Building the system of overseeing the food poisoning and infectious diseases through food; participating the international controlling system on food pollution and food poisoning.

3.2.6.1. Building the program of testing the risks causing food pollution

This program is to determine the risks of food pollution and harm to people's health; find the preventing methods, minimizing and risk controlling. Co-coordinating the related ministries and setting up the program for testing the risks of food poisoning with the contents:

- Building the process of getting food samples in steps of food supply chain
- Testing the risk of food pollution (risk evaluation, risk management, risk announcement).

(1) Evaluation of risks

+ Taking initiative on overseeing the food safety and hygiene by taking regular samples according to seasons, regions to exam the level of microorganism pollution and the chemical residue in food. Concentrating to exam food groups getting high risks, food used popularly by people, cooked food, food additive that are circulated in the markets. Co-coordinating the Ministries to get samples for examine the agricultural products, food, material safety and hygiene.

+ Evaluating the increase in risks of causing pollution, exposing the risks of people, consequence evaluation, and the scope of affect.

+ Evaluation result supplies the data for the plan of building the standard VSATTP and control methods of food safety and hygiene.

+ Building some overseeing places in some critical localities on the risks of food pollution and food poisoning. At the beginning time, this will be carried out in big cities, sightseeing spots, border gates circulating great trade, industrial parks and mainly focus on collective food services.

(2) Management of risks

+ Determining the resolutions of limiting the risks of food pollution in each step of food supply chain; animal transferring and animal products, the system of animal slaughtering, harmful microorganism overseeing, mould, the residue in

fresh food and preliminary processing food, overseeing the infectious diseases from animals to people, imported management, business and the use of vegetable protection chemical, and materials for producing the vegetable protection chemical, industrial waste management, public health, daily life, food processing bases, animal raising bases, cattle and poultry slaughtering bases; the imported management, business and use of food additive, preservative substance in production, food processing and business; management of street food safety and hygiene.

+ Assigning tasks of each Ministry to control, co-ordinate the limitation of food pollution in the process of raising, growing, processing, circulating, business the food.

(3) Communication of risks

+ Implementation the announcement and forecast about the risk of food pollution.

+ Holding the communication of risks to raise people's knowledge on limitation of food pollution and meanwhile provide information of protection methods when the epidemic diseases occur due to food pollution.

Building the system of warning information on the risk of polluted food, the risks of epidemic diseases to cattle, poultry and plant and infectious diseases through food among Ministries, branches from central to localities and globe.

3.2.6.2. Establishment of food poisoning inspection system and infectious diseases through the food

- Setting up inspection process of food poisoning.

- Strengthening the information warning system of food poisoning and infectious diseases through the food in public health between The Ministry of Public Health and cities, provinces bi-directional; setting up the system of information access and receiving.

- Reporting food poisoning from the community health center – district health contingency center, provincial health contingency center, regional Institute – the Department of food safety and hygiene and meanwhile the Provincial health contingency center shall report to Health Department and City or Provincial People's Committee.

- Reporting the infectious diseases through food from the community health center – district health contingency center, provincial health contingency center, regional Institute – the Department of health contingency and meanwhile the Provincial health contingency center shall report to Health Department and City or Provincial People's committee.

- Reporting from the hospital system – Department of Health Care, Department of Therapeutics.

- Accessing the network of information to report food poisoning and infectious diseases through food in provincial health care center, ministerial and sartorial health care center with the Ministry of Public Health (including the information network of Department of Therapeutics, Department of food safety and hygiene, Department of health contingency).

- Establishing the overseeing network of food poisoning.

- Assigning the responsibility when food poisoning happens in the community; the commune, ward health care center will inspect preliminarily, do first aid treatment, take a food sample, medical waste and protect the sample, report and

bring doubt food sample to upper level. The district health care center will inspect in details all related information to food poisoning; testing the sample and testing the reason and report the result to upper level. City or provincial health care center shall investigate mass food poisoning, death for poisoning, testing reasons of poisoning cases that district level can't find reasons. The Central health care center build overseeing centers of food poisoning and infectious disease through food up to the ecological zones, having enough ability to evaluate the risks of food pollution; testing the reasons of food poisoning; and is main technical offices of Ministry of Public Health at areas participating in analysis program of poisoning risks. Striving to 2010, four poison inspection centers will be built at four functional institutes under the Ministry of Public Health in the North area, the Central area, the South area, and Highland area.

- Setting up and carrying out inspection process toward infectious diseases through food: building slaughtering system from central to local. Setting up information system of quarantine management on vegetable, animals, animal products, animal fresh products, preliminary cook; reporting the epidemic diseases of animals, vegetables that have the ability of infecting and harming to people's health.

- Providing data for operation to limit the food pollution.

3.2.6.3. The participation of overseeing system of food pollution and international warning

- Providing full, exact information on the status of diseases caused by food, chemical and microorganism pollution in food to international overseeing system.

- Building and co-coordinating the global methods to overseeing the diseases caused by food.

- Setting up the warning and forecasting system on the quality of nationwide food hygiene safety.

3.2.7. Enhancing the science, technique research operations and science, technique and advanced technology application to serve the management of food safety

3.2.7.1. Science research

Food hygiene safety and health are always new issues. To have the scientific base to give the regulations and standards of food hygiene safety as well as the evaluation of the safety of all food and materials making food. Some main issue is to:

- Level and expense for food poisoning and infectious diseases through food.

- The reason and source of food pollution.

- Evaluation of policy, current programmed about the food safety and hygiene

- Research the relations of food and health.

- Organizing the national and international scientific conference about the food safety and hygiene as: testing the risks and managing the risks of food pollution; warning the risks of unsafe food. Managing the food preservation by radium therapy. Managing safety to food used the technology of gene, applying the HACCP management system in medium – small-scale food enterprises, food preservation substance and food supporting substance...

3.2.7.2. Building the advanced model on food safety and hygiene

- The model of growing safe vegetables and tea. Building the areas of growing safe vegetable, tea in some localities.

- Model of animal raising to assure food safety in the commune scale. Building the area of animal raising (pig, milk cow, chicken, bee) without disease and food safety and hygiene.
- Building the pilot model for the quadratic raising bases applied GAP (growing safety zone and material origins).
- Model of community communication to change the backward behavior, manners and customs for preventing food poisoning and infectious diseases through food.
- Model of Culture - healthy village to prevent the food poisoning.
- Model of street food and urban civilization.
- Model of preventing the food poisoning by globefish, poisoning mushroom.
- Model of food safety and hygiene in collective kitchens, sightseeing spots, festivals.
- Model of interdisciplinary management in controlling the food safety and hygiene from "Farm to dining table".

3.2.8. Promoting the international co-operation of food safety and hygiene in food production, process and business

3.2.8.1. Co-operation, appeal the international support of human resource

Exploiting the capital from International projects, non-governmental organizations, and the government of other countries to support the human sources for establishing the basic foundation about the food management in Viet Nam

3.2.8.2. International co-operation in officer training

- Training the officers in food safety and hygiene management.
- Training the inspectors major in food safety and hygiene.
- Training to improve the quality and practical skill for the testing officers to meet the demand of equipment investment.
- Training consultancy specialists and evaluation specialists in applying the advanced quality control system of food safety and hygiene: GMP, GHP, GAP, and HACCP.
- Training the specialists testing the risks of food pollution in all sectors.

3.2.8.3. International co-operation in controlling the food, agricultural goods, aquatic products through border gate

- Setting up the regulations based on the commercial agreement and regional, international laws in controlling food, agricultural goods, aquatic products through border gate.
- Co-coordinating in controlling food, agricultural goods, aquatic products through border gate.
- Training to improve the qualification and practical skills for testing officers.

3.2.9. Upgrading the investment level for food safety and hygiene in the field of food production, process and business

3.2.9.1. Human being investment

- Assuring the full trained personnel for the system of management, inspection majors in food safety and hygiene in provinces, cities, districts.
- Promoting new training, retraining the major of officers working in the field of management, analysis and inspection of food safety and hygiene.

3.2.9.2. Equipment investment

- Installing testing equipment of food safety and hygiene for the testing rooms in central, regional, city, and provincial route.

- Installing the communication equipment of food safety and hygiene in city, provincial route
- Installing the quick examining set of food safety and hygiene in districts and communes, wards
- Cars for investigation, prevention of food safety and hygiene and diseases through the food as well as the teams of motivative communication on food safety and hygiene.

3.2.9.3. Financial investment

- State budget: The State should give priority of finance to implement the mission of assuring the food safety and hygiene from the central to local. The quality control of food safety in bases shall be guaranteed unless each commune, ward gets 5.000.000 dong/year for all operations of food safety and hygiene.
- Mobilizing the contribution, sponsor of organizations, individuals and promoting the socialization work to assure the food safety and hygiene.

3.3. Assurance of food safety and hygiene in the field of food production, process, business up to year 2015

3.3.1. Domestic and international status

- Before the comprehensive international integration according to the agreement of WTO, in the field of food, there are 2 agreements affecting directly to production, business and trade exchanges such as the agreement on the Application of Sanitary and Phytosanitary (for short SPS) and agreement on Technical Barrier to Trade (for short TBT.).
- To the SPS agreement, Viet Nam health care sector shall expand the activities to: protecting people's health from the risks of food addictive, impurities, poison or the disease causing substance in food. Protecting people's health from the risks of animal, vegetable or aquatic diseases.
- To the TBT agreement, Viet Nam health care sector shall expand: building the standard of food safety and hygiene as the regulations of TBT to make sure that all standard must suit the international rule and no restriction of trade exchanges; participating in building the international regulations of food safety and hygiene.
- Viet Nam status: the tendency "globalization" has created many chances of human being, material resources, financial resources for the operation of food safety and hygiene in Viet Nam but we have to face many challenges as follows:
 - Population boom and quick urbanization have exhausted the human resources.
 - Environment pollution.
 - The development of science and technology has created various food products and getting difficulty in controlling the food safety and hygiene.
 - The regional and international integration tendency has required Viet Nam to strive to equal to other countries about technique, quality standards, food safety and hygiene, rule, quality management application: Food Safety and Hygiene, HACCP, GHP, ISO.

3.3.2. Some big indices of food safety and hygiene in food production, process, and business may reach in 2015

- Implementing the State rules: taking initiative in international economic integration in principle of independence and self – control, some big norms of food safety and hygiene in food production, process, business may reach in 2015.

- Promoting the harmonious work of food standards to complete Viet Nam standard system of food, especially high risky food group based on the international, regional standards and suitable adjustment to the actual conditions in Viet Nam.
- Building the system of quality testing rooms on food safety and hygiene reaching the regional standard, ability to forecast the risks of food pollution and management of risks.
- Interdisciplinary co-operation to set up the system of controlling food pollution in the whole process of food growing, harvest, preservation, production, circulation, consumption.
- The network of management and testing the quality of food safety and hygiene has been united planned and effectively operated.
- Increasing the awareness of law execution on food safety and hygiene for food producers, processors, circulation, consumers.

3.3.3. Direction and solution of food safety and hygiene in the field of food production, process, business up to year 2015

The operation solution is to assure the quality of food safety and hygiene for consumption, people's health protection, socio – economic development and meeting the demand of international economic integration.

Directions and operation solution are to assure the quality of food safety and hygiene up to year 2020 shall be based on the following rules:

- Socializing all activities because of the quality of food safety and hygiene shall be the main guideline to assure the food safety and hygiene, meanwhile Leaders and Authority of all classes, units shall be preside
- Education communication is a central method, going ahead one step in all activities due to the quality of food safety and hygiene
- Assuring the food safety and hygiene based on the triangle of strong infrastructure is the Law of food, investigation of food, analysis of food.

Comprehensive operation solutions are deployed in 6 projects under the Program of National goals on food safety and hygiene:

1. The project of upgrading the quality management of food safety and hygiene.
2. The project of education communication is to assure the quality of food safety and hygiene.
3. The project of strengthen the quality testing capacity of food safety and hygiene; building the overseeing system of food poisoning, infectious diseases through food and risk analysis of food pollution.
4. The project of assuring the food safety and hygiene in agricultural food production, preliminary process, preservation, process.
5. The project of epidemic safety and environmental safety, food safety to aquatic products origins from raising.
6. The project of street food safety and hygiene.

The assurance of food safety and hygiene is multi-sector, highly socialization operation so it needs an active, effective participation of all people, offices relating the food supply chain, specially food enterprises, food directing producers, process, business, The society shall be assured food safety and hygiene when all

products are made and provided to the society safely, managed tightly the quality of food safety and hygiene and selected, used correctly by the consumers. Therefore, the work of food safety and hygiene in Viet Nam is difficult, hardship, long-term struggle and the struggle for the whole population for social security and national race.

APPENDIX
Counterfeit and poor quality goods for food safety in 2001

No.	Goods	Unit	Quantity	Description
1	Wine	Bottle	28,684	Counterfeit, poor quality
2	Beer	Bottle	11,383	Counterfeit, out of date
3	Soft drink	Bottle, Can	43,376	Out of date
4	Mineral water	Bottle	5,458	Counterfeit, out of date
5	Fermented fish sauce, marinated sauce	Bottle	2,912	Brand Imitated, poor quality
		Liter	3,047	Brand Imitated, poor quality
6	Seasoning	Kg	6,797.16	Brand Imitated
7	New medicine	Box	777	Out of date
		Tablet	2,448	Out of date
8	Cosmetics	Box	6,328	Brand Imitated, Out of date
9	Confectionery	Pack, box	14,353	Poor quality, out of date
		Kg	6,440.05	Poor quality, out of date
10	Tobacco	Pack	2,457	Brand Imitated
11	Tinned milk	Box	43,859	Out of date
12	Preserved meat and fish	Box	3,607	Out of date
13	Instant noodle	Pack	41,885	Out of date
		Kg	25	Out of date
14	Spice	Kg	585	Brand Imitated, out of date

		Pack	30	Brand Imitated, out of date
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Counterfeit and poor quality goods for food safety in 2002

No.	Goods	Unit	Quantity	Description
1	Wine	Bottle	17,079	Counterfeit, poor quality
		Liter	300	Counterfeit, poor quality
2	Beer	Bottle, Can	14,815	Counterfeit, poor quality
3	Soft drink	Bottle, Can	168,788	Out of date
4	Mineral water	Bottle	11,823	Brand Imitated, out of date
5	Fermented fish sauce, marinated sauce	Bottle	8,145	Brand Imitated, poor quality
		Liter	2,824	Brand Imitated, poor quality
6	Seasoning	Kg	6,292.32	Brand Imitated
7	New medicine	Box	9890	Out of date
8	Confectionery	Pack, box	17,015	Poor quality, out of date
		Kg	3,458.2	Poor quality, out of date
9	Tobacco	Pack	117308	Brand Imitated
10	Tinned milk	Box	1,263	Counterfeit, out of date
		Kg	170	Counterfeit, out of date
11	Preserved meat and fish	Box	997	Counterfeit, out of date
12	Instant noodle	Pack	907	Out of date
13	Shrimp	Kg	10596.5	Injected with impurities

Counterfeit and poor quality goods for food safety in 2004

No.	Goods	Unit	Quantity	Description
1	Wine	Bottle	9,878	Counterfeit, poor quality
2	Beer	Bottle, Can	9,001	Counterfeit, poor quality
3	Soft drink	Bottle, Can	90,896	Out of date
4	Mineral water	Bottle	35,331	Brand Imitated, out of date
5	Fermented fish sauce, marinated sauce	Bottle	6,316	Brand Imitated, poor quality
		Liter	16	Brand Imitated, poor quality
6	Seasoning	Kg	2291.2	Brand Imitated
7	Confectionery	Pack, box	7,343	Poor quality, out of date
		Kg	8,493	Poor quality, out of date
8	Tobacco	Pack	3,126	Brand Imitated, poor quality

9	Tinned milk	Box	967	Counterfeit, out of date
		Kg	4,835	Counterfeit, out of date
10	Preserved meat and fish	Box	5,366	Counterfeit, out of date
11	Instant noodle	Pack	730	Out of date
		Kg	54	Out of date
13	Shrimp	Kg	19,371	Injected with impurities

Counterfeit and poor quality goods for food safety in 2005

No.	Goods	Unit	Quantity	Description
1	Wine	Bottle	26,240	Counterfeit, poor quality
2	Beer	Bottle, Can	7,454	Counterfeit, poor quality
3	Soft drink	Bottle, Can	31,210	Out of date
4	Mineral water	Bottle	2,691	Brand Imitated, out of date
5	Fermented fish sauce, marinated sauce	Bottle	10,387	Brand Imitated, poor quality
6	Seasoning	Kg	6,676	Brand Imitated
7	Confectionery	Pack, box	24,432	Poor quality, out of date
		Kg	16,778	Poor quality, out of date
8	Tobacco	Pack	3,786	Counterfeit, poor quality
9	Tinned milk	Box	9,662	Counterfeit, out of date
		Case	20	Counterfeit, out of date
10	Preserved meat and fish	Box	7,551	Counterfeit, out of date
11	Instant noodle	Pack	1,850	Out of date
12	Shrimp	Kg	9,779	Injected with impurities
13	Poultry	Each	8,103	Smuggled, no quarantine
		Kg	8,744	Smuggled, no quarantine
14	Viscera	Kg	2,358	Contaminated with harmful chemicals

Counterfeit and poor quality goods for food safety in the first half of 2006

No.	Goods	Unit	Quantity	Description
1	Wine	Bottle	13,216	Counterfeit, poor quality
2	Beer	Bottle, Can	13,394	Counterfeit, poor quality
3	Soft drink	Bottle, Can	27,366	Out of date
4	Mineral water	Bottle	15,247	Brand Imitated, out of date
5	Fermented fish sauce, marinated sauce	Bottle	10,939	Brand Imitated, poor quality
6	Seasoning	Kg	3,361	Brand Imitated
7	Confectionery	Pack, box	5,483	Poor quality, out of date

		Base	12	Poor quality, out of date
		Kg	2,762	Poor quality, out of date
8	Tobacco	Pack	575	Brand Imitated
9	Tinned milk	Box	1,592	Counterfeit, out of date
10	Preserved meat and fish	Box	536	Counterfeit, out of date
11	Instant noodle	Pack	898	Out of date
12	Spice	Kg	224	Counterfeit, out of date
13	Shrimp injected with impurities	Kg	518	Poor quality

APPENDIX

The existing Vietnamese Standards on Food

1. Vietnamese Standards on Food

Group	Group name	Existing Vietnamese Standards
67.020	Processing in food technology	14
67.040	General farming products	51
67.060	Cereals, red bean and their products	46
67.080	Vegetables and its products	71
67.100	Milk and its products	78
67.120	Meat and its products	127
67.140	Tea, coffee, cocoa	72
67.160	Drinks	33
67.180	Sugar, sugar products, starch	47
67.200	Edible oil, fat and attar grain	67
67.220	Spice, additive	55
67.240	Analysis of sence	9
07.100	Microorganism	47
	Total	717

2. Classification of the existing Vietnamese Standards on Food

Group	Total number Standards	Number of VN standards on technical specifications	Number of VN standards on PPT	Number of VN standards on Codes
67.020	14	01	00	13
67.040	51	01	36	14
67.060	46	14	30	02
67.080	71	25	27	19
67.100	78	16	61	1
67.120	127	68	43	16
67.140	72	07	61	04
67.160	33	13	17	03
67.180	47	10	36	01
67.200	67	13	51	03
67.220	55	22	32	01
67.240	9	04	05	00
07.100	47	00	00	47
Total	717	184	396	117
Rate (%)		27.1	55.6	17.3

3. Conformity of Vietnamese Standards on Food: There are about 78 standards on technical specifications having their conformity (making up about 40% of the Standards on technical specifications, about 10% of existing Vietnamese Standards on food).