

Food Safety Risks Management in Vietnam:

CHALLENGES AND PRIORITIES

ROUND TABLE DISCUSSION
Hanoi, 7-8 January 2016

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PART 1. OBJECTIVE AND MEETING AGENDA

1.1. Meeting objective

Objective: The objective of the 2 day round table is to provide the technical assistance mission of the World Bank with i) an overall picture of food safety situation in Vietnam, ii) stock-taking of food safety risks for selected key food value chains, and iii) brainstorming priorities and potential solutions to address key food safety risks.

Date and location: 7th and 8th of January 2016 at Ho Chi Minh room, WB, 63 Ly Thai To, Hanoi

1.2. Meeting agenda

| Time | Activities | Person in charge |
|--|--|--|
| Day 1 (7th Jan): Discussion on primary production: biological hazards, residues, banned substances, toxins, AMR, risks assessment. | | |
| 08:30 – 09:00 | Registration | Lam Thi Binh, Do Thi Tam |
| 09:00 – 09:10 | Opening and objective of the round table, Introduction of participants | Vo Thanh Son (WB) |
| Session 1: Food safety: Contamination situation and health impact. <i>Chairperson: Nguyen Viet Hung (ILRI)</i> | | |
| 09:10 – 09:40 | Pork sector: - Microbial contamination and health risk assessment in pork value chain in Hung Yen and Nghe An provinces - Antibiotic residues, growth promoters and heavy metals in pork at wet markets in Vietnam, 2015 | Dang Xuan Sinh & Tran Thi Tuyet Hanh (HSPH) |
| 09:40 – 10:00 | Prevalence of Salmonella in chicken meat production chain | Pham Thi Ngoc (NIVR) |
| 10:00 – 10:20 | Vegetables and fruits: Food safety situation in Vietnam | Ngo Thi Hanh (FAVRI) |
| 10:20 – 10:40 | Hazard identification in food safety and effective control as an important solution for distribution of safe food products to consumers | Nguyen Van Thuan (NAFIQAD) |
| 10:40 – 11:00 | Coffee break | |
| 11:00 – 11:20 | Overview on the regulations and occurrence of mycotoxins in food and feed in Vietnam | Tran Cao Son (NIFC) |
| 11:20 – 11:40 | PCBs and dioxin in foods in vietnam: Estimated daily intakes | Nguyen Hung Minh (MONRE) Tran Thi Tuyet Hanh (HSPH) |
| 11:40-12:00 | Antibiotic use in food producing animals, residues and antibiotic resistance | Chu Van Tuat (NCVH1) |
| 12:00 – 12:20 | Addressing antibiotic and antimicrobial use in Livestock Production: Initial steps and planning for the future | Scott Newman (FAO) |
| 12:20 – 12:45 | Discussion of session 1 and wrap-up | Dao Lan Huong (WB) |
| 12:45 – 14:00 | Lunch | |
| Session 2: Food safety: value chain, economic impact. Chairperson: <i>Stephane Forman (WB)</i> | | |
| 14:00 – 14:30 | Challenges to safe food production for the domestic market in Vietnam's agricultural value chains | Vien Kim Cuong (Canada Embassy) |

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|---|--|--|
| 14:30 – 15:30 | Impacts of Free Trade Agreements on livestock and SPS issues in Vietnam | Dang Kim Khoi (IPSARD) |
| 15:00– 15:30 | Institutional assessment for strengthening food safety in MARD | Shashi Sareen (FAO) |
| 15:30 – 15:45 | Coffee break | |
| 15:45 – 16:05 | View on the food safety in the Southern, Vietnam | Nguyen Do Phuc (IHPH HCM) |
| 16:05 – 17:00 | Discussion of session 2 and Close day 1 | Vien Kim Cuong (Canada Embassy) |
| Day 2 (8th Jan): Discussion on quality control, standard and certification, enforcement, branding, wholesale and retail, food safety law. | | |
| Session 3: Technical and institutional solutions for food safety. <i>Chairperson: Scott Newman (FAO)</i> | | |
| 08:30 – 08:50 | GAHP and Traceability | LIFSAP/DLP |
| 08:50 – 09:10 | Developing sustainable and inclusive safe vegetable value chains: Moc Chau experience | Pham Thi Sen, NOMAFSI |
| 09:10 – 09:40 | Traceability • Sustainable development in value chain of broiler, layer, and pig production • Solutions for Managing the Production in Agriculture and Tracing the Original of the Agricultural Products | Nguyen Van Chien (CP) Xac Thuc So Technology Jsc. |
| 09:40 – 10:00 | The use of probiotic bacteria as animal feed supplements to reduce antibiotics | Huỳnh Minh Việt (BioSpring) |
| 10:00 – 10:20 | Coffee break | |
| 10:20– 10:40 | Laboratory for food safety system in Vietnam | Chu Van Tuat – Tran Cao Son (NCVH1 and NIFC) |
| 10:40 – 11:00 | Inspection for food safety in Vietnam | Representative (VFA) |
| 11:00 – 11:20 | Food safety management of plant originated foods | Vuong Truong Giang (PPD) |
| 11:20 – 11:40 | A business perspective on food safety in Vietnam | Marieke van der Pijl (VBF WG &FAASC) |
| 11:40 – 12:15 | Wrap-up/discussion of session 3 | Artavazd Hakobyan (WB) |
| 12:15 – 13:30 | Lunch | |
| Session 4: Food safety risk management: looking forwards. Chairperson: <i>Vo Thanh Son (WB)</i> <i>Panel discussion (40 mn each), including coffee break</i> | | |
| 13:30 – 14:10 | Panel 1: Risk-based approach - Discussants: Nguyen Nhu Tiep (NAFIQAD) and Nguyen Viet Hung (ILRI) | Moderator: Fred Unger (ILRI) |
| 14:10 – 14:50 | Panel 2: Institutional setup of food safety (legal, laws) - Discussants: Le Van Son (Canada Embassy), Tran Viet Nga (VFA) | Shashi Sareen (FAO) |
| 14:50 – 15:10 | Coffee break | |
| 15:10 – 15:50 | Panel 3: Formal, informal market - Discussants: Le Viet Nga (MOIT) and Nguyen Thu Thuy (DAH) | Van Hoang Pham (IFC) |
| 15:50 – 16:30 | Panel 4: Prioritization - Discussants: Artavazd Hakobyan (WB) and Pham Xuan Da (NIFC) | Pham Duc Phuc (HSPH) |
| 16:30 – 16:45 | Wrap-up and Close | Vo Thanh Son (WB) |

PART 2. ABSTRACT OF PRESENTATIONS

2.1. SESSION 1 - FOOD SAFETY: CONTAMINATION SITUATION AND HEALTH IMPACT

MICROBIAL CONTAMINATION AND HEALTH RISK ASSESSMENT IN PORK VALUE CHAIN IN HUNG YEN AND NGHE AN PROVINCES

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In Vietnam, pork accounts for 75% of total meat consumed daily at households. However, pork may contain high levels of microbial contamination such as Salmonella and Escherichia coli which might cause harm to consumers. To determine microbial contamination along the pork value chain, we collected 216 samples from 72 pig farms (floor swab, drinking and waste water), 545 from 49 slaughterhouses (carcass swab, lymph node, rectal feces, floor swab and washing water) and 514 from 220 pork shops in the informal markets (pork cuts, ground pork and cutting board swab) in 2 provinces of Vietnam (Hung Yen and Nghe An). A quantitative microbial risk assessment (QMRA) was also applied to estimate the salmonellosis risk from boiled pork consumption. Overall prevalences from combined all types of above mentioned samples at pig farms, slaughterhouses and pork shops for Salmonella were 35%, 30% and 37%, and for E. coli were 91%, 75% and 79%, respectively. Salmonella contamination in the final product (pork at market) was 45% and an average concentration of 9 MPN/g was recorded. E. coli average load along different points of the chain was 5.3 ± 1.4 (farm floor swabs), 2.9 ± 0.9 (carcass swabs), 3.1 ± 1.0 (slaughterhouse floor swabs), and 3.3 ± 1.1 (market shop cutting board swabs) logCFU/cm², whereas pork from market had 3.4 ± 0.9 logCFU/g. Results from the QMRA of Salmonella show that the annually illness risk of the assessed population in Hung Yen was on average 27.1% (90%CI: 1.1-64.4%). Other scenarios related to location and consumer group will be finalized in a next step. Demonstrated high levels of Salmonella in the final product (pork at market) induces the potential health risks for the consumers. Detected values for E. coli indicates general poor hygiene along the chain. Appropriate hygiene practices and management are required to achieve better pork quality and reduce the risk for the consumer.

ANTIBIOTIC RESIDUES, GROWTH PROMOTERS AND HEAVY METALS IN PORK AT WET MARKETS IN VIETNAM, 2015

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In Vietnam, pork makes up 75% of meat consumed and its production delivers substantial benefits to the

smallholders who supply 84% of the market. In the recent years, consumers have expressed special concern over food safety issues, especial health risks associated with chemical hazards, including veterinary drugs, heavy metals and growth promoter residues. This study aimed to assess the concentrations of antibiotic, growth promoters and heavy metal residues in pork collected at wet markets. From April 2014 to January 2015, a total of 190 fresh pork samples were collected at wet markets in Hung Yen and Nghe An provinces to produce 18 pooled samples (representing 18 studied communes). Tetracycline, fluoroquinolones, sulfonamide, chloramphenicol groups and B-agonist were firstly screened by ELISA and positive samples were quantitatively assessed by liquid chromatography–mass spectrometry/mass spectrometry (LC-MS/MS) method. Lead, cadmium and arsenic concentrations were quantitatively determined by AAS method. While pooled samples for tetracycline and fluoroquinolones (0/18) were negative tested we found positive test results for sulfamethazine 50%, 9/18) and chloramphenicol (16.7%, 3/18). The average residue levels were 155.5 (25.6-263.2) µg/kg for sulfamethazine and 0.54 (0.34-0.76) µg/kg for chloramphenicol. Both are prohibited veterinary drugs in Vietnam. Two feed samples, 2 liver samples and one pork sample were positive with B-agonist (Salbutamol). Regarding heavy metals, there were 5/18 (27.8) of pooled samples being positive for lead while for cadmium (0/18) and arsenic (0/18) samples were negative, respectively. The average amount of lead concentration in pork was 74.1 (70.1-78.7) µg/kg, which was still lower than the standard level applied for lead in pork (100 µg /kg). There were no significance differences on the prevalence and concentrations of antibiotic and heavy metal residues between the two studied provinces. The results highlight the presence of sulfonamide, chloramphenicol and B-agonist (Salbutamol) in some pork samples available at wet markets. This finding is a component of an ongoing Pig-Risk project, which is assessing the health risks of chemical hazards in pork and developing incentive-based innovations to improve management of human and animal health risks in smallholder pig value chains in Vietnam.

PREVALENCE OF SALMONELLA IN CHICKEN MEAT PRODUCTION CHAIN

Pham Thi Ngoc, Truong Quy Duong, et al
National Institute of Veterinary Research (NIVR)

Salmonellosis is one of the most prevalent foodborne illnesses. The outbreak of this disease is often associated with eggs and chicken meat. In this study, the prevalence of *Salmonella* was surveyed in the chicken meat production chain. A total of 1,401 samples was collected along the chicken production chain (parent stocks, hatchery, broiler farms, slaughterhouses, retailed shop) in Hanoi, Vietnam. Overall *Salmonella* positive samples were 23.1% (43/186) at parent stocks (water, food, yolk, cloacal swab), 10.3% (28/273) at hatcheries (swab of surface incubator, swab of egg fragment, yolk and died embryo egg), 45.4% (85/187) at broiler farms (water, food, litter, cloacal swab), 43.3% (143/330) at slaughterhouses (processing water, swab of slaughtering area, cloacal swab, carcass swab) and 36.9% (157/425) at retailed shops (swab of equipment, rinsed carcass, carcass). Each 50 *Salmonella* strain at each point of chain was tested for virulence by infect mice and serovar identification was performed by agglutination test on slice for O and H antigen according to the version Kauffmann White scheme. All tested strains killed mouse before 24 hours after infected with 0.2 ml overnight inoculum. 10 difference *Salmonella* serovars were identified *S. Typhimurium* (10.8%), *S. Enteritidis* (10.8), *S. Albany* (21.2), *S. Agona* (17.2), *S. Pollorum galinarum*

(2.0), *S. Derby* (17.2), *S. Hadar* (6.0), *S. Shalkwijk* (6.4), *S. Sainpaul* (5.6), *S. Anatum* (2.4). Especially, *S. Typhimurium* and *S. Enteritidis* were recovered along all points of the chain. 35.8% (72/201) of carcasses and 37% (71/192) of rinsed carcasses were *Salmonella* positive. 7 isolations of *S. Typhimurium*, and 9 isolations of *S. Enteritidis* at retailer shops show the relatively high risk for consumers' health. As human salmonellosis has been repeatedly correlated to the consumption of poultry products worldwide, continuous studies are required to effectively minimize *Salmonella* contamination in poultry production chain.

VEGETABLES AND FRUITS: FOOD SAFETY SITUATION IN VIETNAM

Ngo Thi Hanh and Duong Kim Thoa

Fruit and Vegetable Research Institute - Trau Quy, Gia Lam, Hanoi

With an average production of 15.4 million tons of vegetable and 8.3 million tons of fruits per year, Vietnamese fruit and vegetable production has met the needs of consumers in terms of types and quantity, while the production still focuses on quantity rather than quality. Moreover, the integration into WTO and the ASEAN Community (AC) require Vietnam to improve the quality of fruit and vegetable products and the food safety standards, especially to follow the principles in good agricultural practice (GAP, GAHP), Good Manufacturing Practice (GMP) and Hazard Analysis and Critical Control Point (HACCP).

In the end of 2015, according to the statistics of DCP, there have been 1,530 vegetable production bases under GAP standards with the modest acreage of 12,687 hectares (accounting for 1.44% of the total area of cultivated vegetables). Therefore, in comparison to the market request, the vegetable and fruit outputs remain limited, most of which are used for exports or suppliers to restaurants, hotels and supermarkets. The majority of consumers are still using vegetable and fruit products that do not meet the food safety standards. The limitations and difficulties in implementing VietGAP in vegetables and fruit production include dispersed, spontaneous and small-scale manufacturing processes, the lack of capital and the weakness in cultivation, preservation, processing techniques and management mechanism from input to output of vegetables and fruits.

In the current Vietnamese vegetable and fruit value chain, the main hazards include (i) pesticide residue, (ii) nitrate, (iii) heavy metals, and (iv) micro-organisms. These hazards mainly residues on vegetables and fruits due to the abuse of chemical pesticides, fertilizers or the use of chemicals prohibited in manufacturing, or due to the production in polluted land and water. The hazard contamination may depend on the characteristics of each vegetable and fruit as well as on the practice of farming. Findings on using pesticide in a number of areas producing vegetables (tomato, cabbage, lettuce) show that farmers often mix 2 to 3 pesticides in one spray, select pesticides rotationally and use 10 - 17 pesticides/pest/disease. In addition, the fertilizers used for these crops are quite various, however, the total amount of fertilizer used for 1 acreage unit of land is higher compared to the process approved by the Ministry of Agriculture: 1,5 - 2 times (nitrogen and potassium) or 3 times (phosphate).

Through the extensive information on the situation of production and food safety of fruits and vegetable, the need to assess the current status of food safety in the production of fruits and vegetables will contribute to identify the cause and limitations, thereby propose solutions for the development in vegetables and fruits production, for ensuring food safety and public health and the healthy farming environment.

HAZARD IDENTIFICATION IN FOOD SAFETY AND EFFECTIVE CONTROL AS AN IMPORTANT SOLUTION FOR DISTRIBUTION OF SAFE FOOD PRODUCTS TO CONSUMERS

Nguyen Van Thuan

National Agro-Forestry-Fisheries Quality Assurance Department (NAFIQAD)

Management of food safety must be taken into account in food production and trade; risk analysis related to food safety is an important principle of food safety management as clearly stated in the Vietnamese Food Safety Law. Policies on food safety will also establish the legal framework and perform the mandatory roadmap on quality management system which includes risk analysis and HACCP.

The forest and fishery products have to be analyzed for food safety risks from foods which have a high food poisoning rate, and current production and business conditions do not always ensure favorable environment to make safe products. In recent years, results from food safety monitoring and inspections from the authorities show that many food safety violations can affect consumers and community health.

Ensuring the safety of agriculture, forestry and fisheries products before shipping to consumer, creating consumers trust on products, helping producer business thrives on the volume and the types of products, improving product value and contributing to agricultural production and a sustainable development need to consider food safety and quality assurance issues.

To solve this problem, the food safety hazards must be correctly identified and effectively controlled along the entire value chain. This is seen as an important solution to ensure food safety, the scientific and international integration and a resource-saving society today.

For this purpose and with the support of international donors, the agricultural and rural development sector in Vietnam has been conducted many activities with the message “ensuring food safety together for a sustainable agriculture”.

OVERVIEW ON THE REGULATIONS AND OCCURRENCE OF MYCOTOXINS IN FOOD AND FEED IN VIETNAM

Tran Cao Son, National Institute for Food Control (NIFC)

Mycotoxins are secondary metabolites of fungi found in food and feed. Vietnam regulations define the control and the maximum levels of some major mycotoxins in food and feed including aflatoxin B & G (B1, B2, G1, G2), aflatoxin M1, ochratoxin A, patulin, zearalenone, deoxynivalenol, and fumonisins. Among these mycotoxins, aflatoxin B1 is the most serious threat to human health. Due to the tropical climate in Vietnam, the risks of mycotoxins production in food and feed are reasonably high. Corn and peanut are the most contaminated commodities. There are three main methods which are usually used for the mycotoxin determination in Vietnam including ELISA, HPLC-FLD and LC-MS/MS. In this review, several data from different studies performed in Vietnam about the occurrence of mycotoxins in food and feed were also mentioned. Although these studies were small in scale, they have rang a warning bell of mycotoxin contamination in food and feed in Vietnam.

PCBS AND DIOXIN IN FOODS IN VIETNAM: ESTIMATED DAILY INTAKES

Nguyen Hung Minh¹, Tran Thi Tuyet Hanh², Nguyen Anh Tuan³

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³Division of Chemical Control and Environmental Incident Remediation, Department of Environmental Pollution Control, Vietnam Environment Administration

PCBs, dioxin and other POPs pollution is an important environmental health challenge in Vietnam. Research projects were implemented to estimate the daily intake of PCBs from foods in Vietnam and that of dioxin at Bien Hoa and Da Nang dioxin hot spots. Challenges related to risk assessment and risk management were explored. 101 pooled food samples in Vietnam were collected and analysed for PCB concentrations and 46 pooled food samples were collected in Bien Hoa and Da Nang for dioxin analysis. Results showed that the risk of PCB exposure mainly due to the consumption of meat and eggs of free-ranged animals. Estimated daily intake of dioxin exceeded many times the recommended tolerable daily intake proposed by WHO (1-4 pg/kg bw/day) if people consumed local high risk foods cultured/raised/harvested surrounding the airbases. It is important to develop a National Environmental Health Action Plan with effective coordination mechanisms between related ministries in assessing and managing environmental health risks related to chemical hazards in general and related to PCBs, dioxin and POPs in particular.

ANTIBIOTIC USE IN FOOD PRODUCING ANIMALS, RESIDUES & ANTIBIOTIC RESISTANCE

Nguyen Thu Thuy, Ton That Son Phong, Pham Thi Ngoc, Phung Minh Phong, Hoang Thu Ha, Luu Quynh Huong, Nguyen Thi Lan Anh, Phan Thi Hong Phuc, Tran Thi Mai Thao, Vu Dung Minh, Chu Van Tuat

Management of veterinary antibiotic use was not very good. Many regulations on veterinary drugs were available but farmers and vet practitioners' knowledge, attitude and practice (KAP) were very poor. Farmers played the most important role in applying antibiotics in food producing animals that were mainly based on farmers' experience, commercial information without any support of laboratory results and veterinary supervision. The failures in applying antibiotic choice, dosage, administration route, treatment duration, withdrawal time, antibiotic combination and etc. were as inevitable consequences of residues in animal derived food and promotion of bacteria resistance in animal and human. It is time to apply the "One Health" approach for control of antibiotic resistant bacteria in human, animals and environment.

ADDRESSING ANTIBIOTIC AND ANTIMICROBIAL USE IN LIVESTOCK PRODUCTION: INITIAL STEPS AND PLANNING FOR THE FUTURE

Scott Newman, To Lien Thu, Vo Ngan Giang

Food and Agriculture Organization of the United Nation, Hanoi Viet Nam

Antimicrobial resistance (AMR) is a multi-dimensional threat to human survival, public health, trade and economy and the over-all sustainable development of the country. Antimicrobial resistance is a growing human and economic threat in Viet Nam with the increasing and uncontrolled use of antibiotics in the health system and in veterinary medicine, and for growth promotion and disease prevention in agriculture, horticulture, livestock and aquaculture.

Limited regulations of antibiotic use in the feed and the livestock sector in Vietnam is a controversial issue, as the misuse of antimicrobials had led to an increasing concern about the large amount of antibiotics that are entering the food chain and could promote bacterial resistance and result in less efficient antibiotic treatments for human and animal diseases. This has also contributed to challenges associated with international trade.

Therefore, in order to technically support the Government of Viet Nam, the Emergency Centre for Transboundary Animal Diseases (ECTAD) of the Food and Agriculture Organization (FAO) Viet Nam in collaboration with the Departments of Livestock Production and Animal Health, within the Ministry of Agriculture and Rural Development (MARD) has supported specific national activities including: 1) A pilot study on current antibiotic use and *Salmonella* spp resistance from animal & human samples; 2) revising and signing of the Aide Memoire; 3) A workshop on Management and Use of Antibiotics and Antimicrobials in the Livestock Sector in Viet Nam; 4) a Viet Nam Legislation Review; and 5) A Knowledge-Attitude-Practices study on AMR use in livestock production. These efforts are leading to supporting MARD to develop a Roadmap & Action Plan for antimicrobials and antibiotic use in livestock production. FAO, at headquarters level, has also recently developed an FAO Action Plan on AMR which will support standardizing the approach taken by multiple countries, including Viet Nam, in developing effective action plans and revising legislation in support of healthy livestock production and minimizing risks of antimicrobial resistance. This presentation will provide highlights from ongoing activities.

2.2. SESSION 2 - FOOD SAFETY: VALUE CHAIN, ECONOMIC IMPACT

CHALLENGES TO SAFE FOOD PRODUCTION FOR THE DOMESTIC MARKET IN VIETNAM'S AGRICULTURAL VALUE CHAINS

Kim Cuong Vien

Value Chain Consultant, Canada Embassy

To bring safe foods to end users, three major groups of activities are to be successfully implemented in a value chain. These are: production of safe foods, distribution, and marketing. If any component among these fails, safe foods are not considered to be ended up in the hands of final consumers. The presentation is an overall look of challenges to safe food production for the domestic market in Vietnam, and reviews some of current value chain tools that could address the challenges of production and distribution of safe foods.

IMPACTS OF FREE TRADE AGREEMENTS ON LIVESTOCK AND SPS ISSUES IN VIETNAM

Dang Kim Khoi, PhD

Director of Centre for Agricultural Policy (CAP), Institute of Policy and Strategy for Agricultural and Rural Development (IPSARD)

The presentation analyses the opportunities and challenges that free trade agreements (FTAs) such as WTO, TPP, AEC bring to the Vietnamese livestock sector and summarizes how the country implement WTO's sanitary and phytosanitary (SPS) measures to comply with FTAs. Since its WTO integration, Vietnam has significantly increased its imports in both animal feed products, raw materials for animal feed (corn, soybean) and meat (chicken, beef, pork). The livestock sector is expected to face with more challenges when the nation has to open up its domestic market to imported products from other countries under TPP and AEC commitments. As the room for reducing Vietnam's import tariff's to TPP livestock products (US, Canada) is still large, this is likely a key channel that seriously affects the livelihood of Vietnamese livestock producers. Besides, foreign direct investment is another influential dimension of 'new generation' FTAs to Vietnamese livestock sector.

Since its WTO integration, Vietnam has issued many legal and policy documents to implement SPS regulations such as Decision 147/2008/QD-TTg about the National Action Plan promoting SPS commitments, the Food Safety Law 2010, and several Decisions of Ministry of Agricultural and Rural Development (MARD) related to safe livestock husbandry practices. Nevertheless, the current standard of the SPS system that Vietnam applies is still lower than for most of livestock exporting countries and in general, the current national SPS system is unable to help to protect the livestock sector. TPP is expected to provide a better SPS framework for its member regarding equivalence and assessment of risk and determination of the appropriate level of Sanitary or Phytosanitary Protection. To take advantage of new SPS regulations, Vietnam has to improve its research capacity to provide the scientific evidence once the nation decides to apply SPS measures.

INSTITUTIONAL ASSESSMENT FOR STRENGTHENING FOOD SAFETY IN MARD

Shashi Sareen

Senior Food Safety and Nutrition Office, FAO Regional Office for Asia and the Pacific Bangkok, Thailand

Under the Food Safety Law 2010 the responsibility for food safety in Vietnam has been assigned to three ministries namely MOH, MARD and MOIT, with each ministry being assigned specific products to be handled across the entire chain. Based on a request from the Minister of MARD for FAO's support to restructure and strengthen the management and coordination of Food Safety within MARD, FAO had carried out an independent assessment of the food safety management scenario by meeting and discussing with different ministries, departments and stakeholders and had brought out recommendations for restructuring and strengthening the structure within MARD and also raised some important issues that required addressing for better food safety outcomes at National level.

This presentation highlights the observations and recommendations under three basic areas namely legislative and regulatory framework, institutional arrangements in terms of structure; and implementation aspects (systems and procedures) which may be useful not only to MARD but also to other ministries/ departments for improving food safety outcomes in Vietnam.

VIEW ON THE FOOD SAFETY IN SOUTHERN, VIETNAM

Nguyen Do Phuc

The Southern Regional Testing Center for Food Safety- Institute of Public Health in Ho Chi Minh City, Viet Nam

The Institute of Public Health in Ho Chi Minh City is located under the Ministry of Health (MOH). Based on a request from the MOH and the Viet Nam Food Administration (VFA), the Institute of Public Health in Ho Chi Minh City has responsibilities for testing food safety for domestic and imported food, provide guidance on techniques about food safety for 21 preventive health centers at provincial level in the South of Viet Nam, including scientific studies, training and international cooperation, implementation a monitoring program to detect hazards in food.

This presentation relates to factors that may affect the health of communities and are able to cause food poisoning. It will describe some food poisoning outbreaks which have occurred in the southern region and the identified causes. Based on data analysis, laboratory testing and results from the ongoing monitoring program every year key activities include: the identification of some food hazards, a review of capacity for analysis at laboratory and provision of suggestions at some points to improve the management of food safety in the Southern region of Viet Nam.

2.3. SESSION 3 - TECHNICAL AND INSTITUTIONAL SOLUTIONS FOR FOOD SAFETY

DEVELOPING SUSTAINABLE AND INCLUSIVE SAFE VEGETABLE VALUE CHAINS: MOC CHAU EXPERIENCE

Pham Thi Sen

Northern Mountainous Agriculture and Forestry Science Institute (NOMAFSI)

Results of consumer and value chain studies show that, for accredited safe and fresh vegetables (i) Ha Noi consumers have increasing needs and are ready to pay with higher prices, (ii) Moc Chau is a well-known “origin of quality vegetables” for Hanoi people, (iii) there are about 200 stores and supermarkets in Hanoi with increasing needs and capacity to retail, (iv) Moc Chau small-scale farmers are good potential producers (they have suitable conditions of climate and land and also have needs to develop vegetables to increase their household economy). But how to link these stakeholders better and make the two ends meet?

To answer this question, the project “Improved market engagement for counter-seasonal vegetables producers in North-West Vietnam”, supported by ACIAR and implemented by a multi-principle and multi-organizational team comprising researchers from UQ, NOMAFSI, CASRAD, VNUA, FAVRI, FS, Helvetas and CIRAD in partnership with Moc Chau district authority and Son La provincial Department of Agriculture and Rural Development has spent inputs to (i) diversify the vegetables types and varieties, (ii) develop farmer-farmer links, (iii) help farmers organizations to comply the VietGap criteria, (iv) develop links between farmers organizations – wholesalers – retailers – consumers, and (v) increase the consumers and retailers trust in the vegetables safety and quality.

After four years, the project has developed inclusive value chains for safe vegetables from Moc Chau to Hanoi, involving 68 farmers organized in 4 organisations. Each year, through these chains, hundreds tones of Moc Chau safe vegetables (complying with VietGap criteria) were supplied to Hanoi consumers via big and small retailers, including Fivimart, BigGreen, Metro, Bác Tôm, BigC, Chát Việt ect. This has helped to increase the gross margins for vegetables per household for member households from an average of 12 mil in 2012 to 30 mil VND in 2014 respectively. As calculated by farmers the total return in 2015 per hectare per year was 150 mil - 350 mil VND with a net income of 75 mil to 150 mil VND depending on the vegetable type.

Acknowledging the benefits from participating in the value chains of safe vegetables, more and more farmers in Moc Chau wish to become members of farmers organizations formed under the project. The organisations have also planned to extend their markets to other cities than Ha Noi, such as Son La, Ha Long and Hai Phong.

SUSTAINABLE DEVELOPMENT IN VALUE CHAIN OF BROILER, LAYER, AND PIG PRODUCTION

Nguyen Van Chien
C.P. Vietnam

C.P. Vietnam, owned by C.P. Group, has invested in Vietnam over 20 years. With the aim of improving the quality of life for Vietnamese people through safe, quality and low-cost food products, C.P. Vietnam has adopted food manufacturing processes based on enclosed standards in chain 3F (Feed, Farm, Food). With closed processes, which means that all products from the first step (Feed) go through breeding on farms (Farm) to the food processing factories (Food). They are distributed to the consumers after strictly quality control to ensure standards, including: food safety, nutritional quality, consumer tastes, traceability of origin, and control of chemical residues as a requirement of food regulations.

The 3F model of closed production of C.P. Vietnam applies the scientific and technological progresses which contributes to improve productivity, reduce costs and minimizes the natural resources consumption and environmental impact etc. That supports the sustainable and efficient development of C.P. Vietnam and as such contributes to safe and healthy life for the people of Vietnam.

SOLUTIONS FOR MANAGING THE PRODUCTION IN AGRICULTURE AND TRACING THE ORIGINAL OF THE AGRICULTURAL PRODUCTS

Do Duy Dang and Nguyen Cong Tri
Xac Thuc So Company

Amid the increased challenges in plant production such as: soil erosion, water contamination, residue of chemical fertilizers, promoters, and pesticides, the system of quality control and tracing the original of agricultural products is necessary to ensure the food safety. The system of agricultural production control and tracing products' original focuses on production, inputs – outputs, processing and distribution. This model can help tracing the origin of agricultural products such as tea, meat, or fruits and vegetables. It benefits both producers and consumers by saving the cost of paper work related to agricultural production as well as better management of product's brands. The model also supports consumers tracing agricultural products' origin. Consequently, it will facilitate the food safety management in general.

THE USE OF PROBIOTIC BACTERIA AS ANIMAL FEED SUPPLEMENTS TO REDUCE ANTIBIOTICS

Huynh Minh Viet
CEO, BioSpring

Intensive livestock production produces a severe burden on animals resulting in stress, infection and ultimately production losses. Antibiotics have been applied excessively in feed and at farms to control diseases, resulting in detrimental consequences in public health.

One advanced technological solution to reduce antibiotics is the application of live bacterial supplements referred to as 'probiotics'. Probiotics improve innate immunity, control the growth of with harmful bacteria, restore the gut microflora, improve digestion, and reduce odor in farming. The most suitable probiotic bacteria are heat-stable bacteria such as *Bacillus* in spore form, which can be added to feed and used at farms. The application of *Bacillus* bacteria in replacing antibiotics improves farming productivity and reduces expenses to feed companies and farmers.

BioSpring partners with Royal Holloway, University of London and SporeGen is the global leader in *Bacillus* to produce *Bacillus* spores with highest standards. BioSpring also collaborates with Veracus and FG Systems, two leading companies in Germany specialized in animal nutrition and immunity, to formulate sophisticated probiotics products that replace antibiotics and improve animal health.

LABORATORY FOR FOOD SAFETY SYSTEM IN VIETNAM

Chu Van Tuat (NCVH No.1) and Tran Cao Son (NIFC)

Pursuant to the Law of Food Safety dated June 17, 2010, the Circular 13/2014/TTLT-BYT-BNNPTNT-BCT dated April 09, 2014 allocated tasks and cooperation among regulatory agencies of the Ministry of Health (MOH), the Ministry of Agriculture and Rural Development (MARD), and the Ministry of Industry and Trade (MOIT) in food safety management.

MOH is responsible for food safety management of bottled water, mineral water, functional foods, supplementary micronutrients and micronutrient-fortified foods, food additives, flavorings, food processing aids, instruments and materials for wrapping and storing food, consumable ice etc.

MARD is responsible for food safety management of cereal, meat and edible by-products of livestock, blended products that contain meat such as sausages, salami ect.: aquatic animals, vegetables, fruits, eggs, raw milk, honey, salt, spices, sugar, tea, coffee, pepper, cocoa, cashew, other agricultural products such as bird nests, seeds and/or genetically modified foods.

MOIT is responsible for food safety management of beer, alcoholic drinks, processed milk, vegetable oil, flour, starch, confectionery etc.

For each ministry, there is a network of food safety related lab system of management organizations and research institutes, professional centers and universities. For some large provinces, there are experimentation and analytical service centers related to food safety tests. In addition there are also some

companies supplying the experimentation and analytical service on food safety.

Most food laboratories operate in accordance with ISO 17025 requirements. Within the food safety management scope of food products, the competent authorities assess, assign, grant professional laboratory codes and/or issue decisions with the list of tests for food safety.

FOOD SAFETY MANAGEMENT OF PLANT ORIGINATED FOODS

Vuong Truong Giang

Plant Protection Department, MARD

In the recent years, food safety management for plant originated food has gained remarkable progresses. To name a few, the public regulation documentation system was set up, mechanism for management was established and guidance was issued, and the collaboration of different ministries and institutions has been strengthened. However, there are some challenges facing the food safety managers. These include: the residues of plant protection chemicals in plant food production which exceeds the limits of 10% of the collected samples and microbial contamination, heavy metal contamination, the mycotoxins and etc., being found in plant food products. Moreover, the perceptions of producers in this regard were not high. As such, ensuring the plant food safety is still one of the priorities of food safety managers in the current context. Assessing the mechanism and implementation in plant food safety management to better inform related policies and regulations is a solution for ensuring the food safety for domestic market and export.

A BUSINESS PERSPECTIVE ON FOOD SAFETY IN VIETNAM

Marieke van der Pijl

Food, Agri and Aqua Business Sector Committee of the European Chamber of Commerce; Agribusiness Working Group of the Vietnam Business Forum

The number of people that get sick because of food poisoning in Vietnam does not really differ that much from other countries. It are the health risks at long term that cause worries. Diseases caused by too high levels of or incorrect use of additives (saccharin, sodium cyclamate, carmine, amaranth, sulphur dioxide), pesticides, antibiotics, certain heavy metals, the use of harmful products such as methanol, growth hormones, bleaching chemicals, potassium bromate, toxic packaging material and the presence of mycotoxins or mould.

Vietnam ranks high for exports of various agricultural products, but Vietnamese products are perceived as of lower quality and value, competitive on price but not on quality and are often rejected by importing countries for the same reason as why unsafe food causes health issues. This needs to be changed as it does not do justice to the Vietnamese products, limits export opportunities and impacts the health of the Vietnamese population.

From a business perspective we believe that several of the food safety issues are caused by the fact that laboratories are not up-to-global-standard, there are difficulties in Food Safety Management, there is a lack of a good traceability system, products that are better for crop, health and environment are treated worse, there is a lack of best practices for sale and use of pesticides/fertilisers, there are difficulties in training farmers about best practices, there is a lack of harmonisation and coordination in many areas, ingredients that damage one's health are illegally used or still allowed to be used, there are problems with the cold-chain during transport, storage and at customs check-points, the lack of enforcing existing legislation, and finally the consequences of breaching those regulations not being severe enough.

We believe that a centralised Food Safety Agency could address many of these issues, even though we realise it will take time to have such an agency in place. Moreover, enforcing existing legislation and making the consequences for breaching that legislation more severe would in our view improve the overall food safety in Vietnam even more.

2.4. SESSION 4 - FOOD SAFETY RISK MANAGEMENT: LOOKING FORWARDS

Panel discussion

Panel 1: Risk-based approach - Discussants: Nguyen Nhu Tiep (NAFIQAD) and Nguyen Viet Hung (ILRI)

Panel 2: Institutional setup of food safety (legal, laws) - Discussants: Le Van Son (Canada Embassy), Tran Viet Nga (VFA)

Panel 3: Formal, informal market - Discussants: Le Viet Nga (MOIT) and Nguyen Thu Thuy (DAH)

Panel 4: Prioritization - Discussants: Artavazd Hakobyan (WB) and Pham Xuan Da (NIFC)

PART 3. TECHNICAL ASSISTANCE MISSION AND LIST OF PARTICIPANTS

3.1. Technical Assistance Mission

Food Safety Risks Management: Challenges and Priorities (January 6 – 15, 2016)

The World Bank has been working with other Development Partners and various ministries and agencies of the Government on scaling up support on the food safety agenda. The Food Safety Working Group (FSWG) is an initiative to bring key Government Agencies/Line ministries and development partners (DPs) together for joint policy dialogue and discussions on food safety issues in Viet Nam. It was created at the request of, and convened under the auspices of, the Deputy Prime Minister Vu Duc Dam at a meeting in June 2015 chaired by DPM Dam and benefits from the active participation of Office of Government (the designated focal point of coordination), Ministry of Health (MoH), Ministry of Agriculture and Rural Development (MARD), Ministry of Industry and Trade (MOIT) from the Government side and of the Food and Agriculture Organization (designated focal point among development partners), Asian Development Bank (ADB), Canadian Embassy, JICA, New Zealand Embassy, and the World Bank.

A priority request received from Government was for an urgent assessment of prevailing food safety risks in Vietnam, based on international best practice in risk assessment methodology. A concept note has been prepared and has benefitted from a technical review and endorsement by DPs and Government agencies under the Food Safety Working Group.

An initial mission has been scheduled from January 6 – 15, 2016. (The mission will take place simultaneously with an implementation support mission for the Livestock Competitiveness and Food safety Project – Additional Financing [LIFSAP – AF]. Specifically, the relevant objective of this mission is to launch the Food Safety Risks Management analysis, with a specific focus on a stock-taking of food safety risks in a few selected value chains in Ha Noi and Ho Chi Minh City. This analytical work will be led by the World Bank in collaboration with Canadian Embassy, Asian Development Bank (ADB) and Food and Agriculture Organization (FAO) and will be coordinated by Office of Government. As such, this analytical work is a joint effort by the members of the FSWG to contribute to the on-going efforts from the Government of Viet Nam in addressing food safety issues.

An initial schedule of the mission is enclosed in following Table.

Attachment: Livestock Competitiveness and Food Safety Project Implementation Support Mission, Food Safety Risk Management Study (January 6 – 15, 2016)

Table 1. Mission Schedule

| Date | Time | Activities | Remarks/Venue |
|--------------------------|------|---|---------------|
| Wednesday, January 6 | AM | Mission team meeting | WB |
| | PM | Kick-off meeting with LIFSAP | PCU of LIFSAP |
| Thursday, January 7 | AM | Round table discussion on primary production: biological hazards, residues, banned substances, storage, cold chain, toxins, AMR... | WB |
| | PM | | |
| Friday, January 8 | AM | Round table discussion on quality control, standard and certification; VietGAP, GAHP, risks assessment, inspection, enforcement; traceability, branding, wholesale and retail, food safety law... | WB |
| | PM | | |
| Saturday, January 9 | AM | Travel to Ho Chi Minh City | |
| | | Meet with Ho Chi Minh City's DARD | |
| | PM | Visit wholesale markets and value chains of pork and vegetables | |
| Sunday, January 10 | AM | Visit Animal Health Center Zone 6 | |
| | | Visit a private sector food processing (TBD) | |
| | PM | Return to Ha Noi | |
| Monday, January 11 | AM | Visit wholesale markets in Ha Noi | |
| | PM | Visit GAHP and safe vegetable production zone in Quoc Oai district | |
| Tuesday, January 12 | AM | Meeting with Viet Nam Food Administration | VFA |
| | PM | Meeting with NAFIQAD and Plan Protection Department | MARD |
| Wednesday, January 13 | AM | Meeting with MOIT | MOIT |
| | PM | Meeting with SPS Office in MARD | MARD |
| Thursday, January 14 | AM | Ceremony for Launching of LIFSAP AF | TBD |
| | PM | Meeting with LIFSAP on AF | PCU |
| Friday, January 15 | AM | Mission team meeting | WB |
| | PM | Wrap-up with OoG, MOH, MARD, MOIT and other government agencies as relevant | |

3.2. List of participants (Round table discussions, 7-8 Jan 2016, meeting)

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