

SOLUTIONS TO ELIMINATE RESIDUES OF BANNED ANTIBIOTICS/CHEMICALS IN FISHERIES PRODUCTS OF VIETNAM

Nguyen Tu Cuong

*Director of the National Fisheries Inspection and Quality Assurance Centre,
Vietnam Ministry of Fisheries*

1. INTRODUCTION

1.1. Many countries ban or stipulate maximum residue limits of antibiotics/chemicals in fisheries

In the EU market, the European Commission issued the Directive no. 96/23/EC dated on April 29th 1996, regulating their fisheries exporting countries to control 5 groups of residues of harmful chemicals which are heavy metals, pesticide, mycotoxin, some antibiotics, and growth promoting substances. For antibiotics, the EU banned 10 antibiotics including chloramphenicol and nitrofurans while stipulating a maximum residue limits (MRLs) for 10 others.

In the US market, on May 22nd 1997, the U.S. Food & Drug Administration (FDA) promulgated the Act no. 62FR 27947 banning 11 kinds of antibiotics including chloramphenicol and nitrofurans, and stipulating MRLs of 10 others.

Other countries like Canada, Japan or Korea also now have similar regulations.

1.2. The strict control of antibiotics/chemicals in food started on the EU market in early August 2001 when a shrimp salad mixed was detected with chloramphenicol in a restaurant in Austria

Thenceforth the intensive tests of antibiotics were implemented in all of 15 EU countries. Until now, there are as many as 7 Asian countries, 1 European country and 1 American country were subjected to systematic check for antibiotics by the EU. Switzerland, Canada, the US and Korea applied strict measures to control antibiotics residues.

1.3. The equipment and methods to test antibiotic residues varies amongst the EU member countries since then

Early 2002, the EU announced the usage of HPLC/MS equipment or GC/MS to check chloramphenicol with limit of detection (Lod) of under 0.3ppb. Until now, some countries have used LC/MS/MS with Lod of 0.1 ppb. Shortly after the EU, Canada announced to lower Lod of test equipment from 2.5 ppb to 0.3 ppb. The US reduced Lod from 5 ppb to 1 ppb and is going to reduce it to 0.3 ppb in the coming time. Korea announced Lod to be 1.5 ppb.

1.4. The treatment rules for antibiotics-contaminated consignments are different in different countries

Canada and Korea do not allow the imports of those consignments and put the exporters on alert.

USA only allows taking the contaminated consignment out of importing port if another country accepts to import that consignment or the competent authority of exporting country commits to supervise the treatment of the consignment. If no one of two above conditions is met, the consignment will be destroyed. The exporter shall be put on the alert network of FDA.

EU member countries retain all contaminated consignments for destruction and put exporters on alerts network of EU.

2. ANTIBIOTICS CONTAMINATIONS PROBLEM IN FISHERIES OF VIETNAM

2.1. Vietnam faced with antibiotics/chemicals issue

The first shrimp consignment of Vietnam was detected with chloramphenicol residues in September 2001. Right after that, European Commission announced Decision no. 2001/699/EC on checking antibiotics in 100% shrimp consignments originated from Vietnam. In March 2002, a consignment of farmed fishes of Vietnam was detected with Furazolidon. That led the EU to issue Decision no. 2002/250/EC to check antibiotics in 100% farmed fishery products of Vietnam.

The EU Decision on systematic check of antibiotics in 100% consignments of shrimp and fishes of Vietnam made a large impact on the international fishery markets. The US, Canada, Korea, Thailand followed that by announcing to check antibiotics in all imported aquaculture products including the ones from Vietnam.

Vietnam fisheries trade was also affected. The fisheries importers become more worried when they purchased goods. Not only quantity of fisheries exports of Vietnam did narrow but their prices also fall down. The reduction of fisheries exports caused strong impact on aquaculture industry and also on employment, on the life of thousands of fishfolk and farmers.

2.2. Solutions for Vietnam

2.2.1. Vietnam Government and Ministry of Fisheries confirm that prevention of using antibiotics/chemicals in aquaculture and animals of husbandry is long-term strategy

Preventing antibiotics/chemicals in food not only settles emerging difficulties in export markets but also protects Vietnamese consumer's health and great contributes to assuring stable development of aquaculture.

2.2.2. Vietnam has applied the following measures after the first occurrence of antibiotics in fishery products

2.2.2.1. *Improving legislation system*

- The Prime Minister issued an order banning import, production and usage of harmful antibiotics/chemicals in aquaculture and agriculture. The List of harmful antibiotics was promulgated by the Ministry of Fisheries and Ministry of Agriculture and Rural Development.

- The Ministry of Fisheries issued decisions announcing the lists of antibiotics banned in fisheries industry (including 10 kinds of antibiotics banned by EU and 11 kinds banned by the US) together with 10 antibiotics which MRLs needs to be controlled in fisheries; stipulating penalties for infringements. The Ministry of Fisheries also issued guidelines assigning commissions to Local People Committee, central and local authorities controlling the hygiene and safety of fishery production, aquaculture farms and fisheries processing establishments to prevent the above circumstances.

2.2.2.2. *Defining causes of antibiotic contamination in aquaculture*

The Government competent authority in controlling fisheries quality, hygiene and safety, the National Fisheries Inspection and Quality Assurance Centre (NAFIQACEN), has carried out 3 campaigns to sample feed, veterinary drugs, chemicals, by catch & farmed fish before and after storage, cleaning agents and disinfectants, processing equipments, antiseptic creams used for hand treatment by workers. Through samples testing, NAFIQACEN defined the cause of antibiotics contamination in fish products to be mainly derived from feed for fish, as veterinary drugs.

2.2.2.3. *Working out urgent controlling actions*

a. Firms producing feed for fish must add controlling activities of antibiotics/chemicals to GMP, check antibiotics in all consignments before displaying for sale. They must label on each package of products with phrase "Not contain antibiotics, chemicals banned by Ministry of Fisheries" (Decision no. 01/2002/QD-BTS dated January 22nd 2002 of the Fisheries Minister).

The producers of veterinary drugs/chemicals used in aquaculture must stop producing drugs/chemicals for treatment or prevention of fish diseases, which contain banned antibiotics/substances, and were responsible for finding out, detaining and destroying such drugs/chemicals.

b. Fish processing establishments added procedures of antibiotics/chemicals control in materials at receipt to HACCP system. Many establishments purchased ELISA, co-ordinating with farmers to take samples for checking antibiotics in fisheries before harvesting.

c. Suppliers of feed, chemicals, and veterinary drugs are required to provide antibiotics checking results to farmers. The farmers begin to apply hygienic aquaculture models, using only antibiotics, chemicals from the allowed product list in accordance with guidelines of the MOFI and local fisheries extension authorities to treat pond and diseases.

d. The National Fisheries Inspection and Quality Assurance Centre

- Organizing training courses for managers, establishments, fishfolk and other stakeholders about harmfulness of banned antibiotics/chemicals, teaching them the alternative measures.

- Examining regularly and irregularly the execution of HACCP in establishments; taking samples for testing antibiotics in each consignment before exporting.

- Equipping ELISA with Lod of 0.1 ppb to quickly test antibiotics in materials and final products. Positive samples will be confirmatory tested on GC/MS and GC-ICD with Lod of 0.3 ppb. NAFIQACEN is purchasing the supplementary equipments including LC/MS/MS with Lod of 0.01ppb and is periodically sending analysts to update their skill of chemicals and antibiotics detection in the EU member countries and Korea. The NAFIQACEN's laboratories are practicing ISO 17025 to lab management and applying for international recognition.

- Monitoring Plan on certain substances residues in aquaculture animals and aquaculture products has been upgraded and the number of samples to be taken was doubled in comparison with the number imposed by the EU.

- According to the rules by the Ministry of Fisheries, factories which products are being detected with antibiotics by the EU after April 3rd 2002 will be temporarily suspended to export to the EU until the control of antibiotics of the factory shows the favourable results.

e. Local examination authority (every coastal province each).

- Examining regularly and irregularly production condition of feed producers and veterinary drugs/ chemicals suppliers. Any doubted products must be sampled for checking test.

- Seizing and destroying any lot of fisheries products detected with antibiotics.

2.2.2.4. *Long-term solutions*

a. Maintaining the measures of Government authorities:

- The legislation dissemination and training courses for stakeholders will be kept continuously.

- Monitoring Plan on certain substances residues in aquaculture animals and aquaculture products is improved with doubled number of samples for testing.

- Improve the legislation on management of import, production and using of antibiotics/chemicals in aquaculture.

- Improving operative ability of control authority and treating severe violation.

b. Studying the alternative program:

- Further study the planning of farms and instructing farmers on organic and extensive aquaculture without using chemicals or antibiotics.

- Increasing the application of herbal drugs as alternatives to antibiotics and instructing on the use of permitted antibiotics, replacing banned ones.

- Applying Good Aquaculture Practices (GAP) in controlling safety aquaculture areas in accordance with HACCP and certifying the hygienic farms.

2.3. Some results

- On April 3rd 2002, the European Standing Committee on Food Chain and Animal Health voted to discontinue the systematic check on 100% fisheries consignments from Vietnam based on the results of antibiotics control of Vietnam.

- On September 19th 2002, the Canadian Food Inspection Agency (CFIA) announced to stop checking 100% fisheries consignment of Vietnam if those consignments are tested and issued Health Certificate by NAFIQACEN.

- On September 20th 2002, the European Union decided to lift its intensive examinations of all shrimp shipments from Vietnam for antibiotics/chemicals residues.

3. CONSTRAINTS AND PROPOSALS

3.1 Constraints

Fisheries exporting countries, including Vietnam, are facing the following difficulties:

- Firstly, the scope of controlling dangers of residues of antibiotics, chemicals is too large and complicated while the controlling authority have difficulties in personnel and equipment capacity.

- Secondly, importing countries have different regulations on analysing equipments and methods as well as Lod of testing equipment. They also continuously change or renew their equipments and apply immediately without giving transition time to exporting countries to adapt to the new analysing equipments and methods.

3.2 Proposals

- SEAFDEC and AFF should request CODEX to build up the standards of analysing methods and Lod of antibiotics analysing equipments.

- SEAFDEC and AFF should recommend exporting countries to officially proclaim equipments and methods of testing antibiotics and give appropriate transition time to exporting countries for adapting if they make any change.

- SEAFDEC and AFF should help ASEAN in technical training of testing harmful substances and application of HACCP in farming sites.