

More Attention must be Paid: Food Safety Concerns in Aquaculture Industry

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Global animal production has been continuously increasing for decades to meet the increasing demand and fishery products are not an exception. Considering the last 25 years statistics, it can be seen that capture fishery production roughly fixed around 90M ton per year. However global fish production reached at about 171 million tons in 2016. This gap has been met by aquaculture which is representing 47 percent of the total fishery production in 2016.

Global per capita fish consumption rises above 20 kilograms in 2018, and it was only 9 kg in 1961. This increment reveals that positive effects of fish consumption on human health has also been parallely rising as long as consumed fish can be considered fully healthy.

Basically, aquaculture is a mimic of natural processes in intensive manner under completely controlled conditions. All the inputs such as fertilized eggs, larvae, juveniles, feeds etc. are produced under human control. The major output is always highly valuable animal protein which is produced in such high quantities that it cannot be compared with the quantities to be obtained by natural processes. This production rate will definitely continue to growth as the world population increases. Unfortunately, there is always a 'cost', and the mother nature has now been experiencing the drawbacks of this cost.

Higher demand pushes production, and higher production forces to expand holding capacity of the natural waters to meet the growing demand. Intensification in biological processes always come together with potential problems such as environmental deterioration, chemical accumulation, diseases, invasion of wetlands, deforestation (mainly mangroves) etc. To eliminate the risk factors on aquaculture, fish farmers tend to use many drugs and chemicals including pesticides, disinfectants, antifungals, antibiotics and other pharmaceuticals. However, all these chemicals can eventually reach from farm (ponds, raceways, sea cages) to table as residue in fish tissues.

Aquaculture-borne environmental deterioration is highly appearing in some Asian countries in where shrimp and pangasius farming are much more common. Major portion of these products are exported. Therefore, the detrimental effects of aquaculture (due to the conscious/unconsciously improper practices) does not affect only the originated country, have been shared by all stakeholders. It reveals that every person who consume fish is potentially under the risk of exposure chemical residues.

The most of the aquaculture activities have been monitored by governmental or non-governmental bodies in most of the countries. However, particularly in the production countries where monitoring activities are limited, much more attention must be paid to eliminate public health hazard.

The ultimate solution to protect our nature and the public is to raise awareness of the issues in all the platforms. Economic growth in aquaculture industry is of course very important, however a growth performed by a production above the holding capacity of the environment which destroys the almost all the aquatic habitats and disregarding the health of people is not acceptable. Naturally, governments have been supporting the companies to boost the growth of aquaculture industry. However, governments have also an unavoidable and permanent responsibilities on monitoring whether these supports are being used in an environmentally sound manner or not. Sustainability in production must be the first limiting factor of these financial supports.

Although aquaculture has lower environmental impact to the nature compared to ruminants and poultry farming, there are still lot to do to improve eliminating the negative effects of aquaculture. Educating of all the stakeholders, particularly producers and consumers, will definitely make a huge contribution. Aquaculture is definitely ultimate future of high-quality animal protein supply industry [1-3].

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