

Editorial

Aquaculture in the Future: The Way to Resolve Food Shortage?

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Aquaculture is the fastest growing food sector and continues to expand alongside terrestrial crop and livestock production. In the past ten years, aquaculture industry in the world develops very fast, especially in China [1,2]. More than 3 billion people obtain one-fifth or more of their animal protein from fish and fish area primary protein source for households in 21 countries. The global average per capita supply of fish has increased dramatically during the last 40 years, from 12.7 kg/year in the 1961 to 21.4 kg/year in 2010 [3]. Thus far, the commercial aquaculture productions have already become the primary daily ration in many countries, such as Japan, South Korea and New Zealand. Hence, the aquaculture industry has been considered to be as a potential way to resolve the food shortage caused by the rapid growth of the global population.

However, there are some factors limited the further development of the aquaculture industry, such as the decreasing natural fishery resource, the restrictive dietary protein source, the pollution water environment, the large outbreaks of aquatic diseases, and lack of efficient management [4]. So the key to improve the aquaculture production is to resolve these problems mentioned above.

Firstly, fishery resources including freshwater and seawater species should be protected all over the world. Some powerful measures must be taken to prevent these damage behaviors especially from the law level. Much more money needs to be provided for fishery protective research, especially for endangered fishes [5]. And the most important thing is to improve human consciousness for protecting fishery resources.

Secondly, much more fish meal need to be replaced by plant protein. As the fast development of the aquaculture industry, more protein resource is required for commercial feed production. Traditional fish meal can't maintain the requirement due to decreasing marine catches, so the plant protein are become more and more important for aquatic feed production [5]. At the same time, fish nutritional requirement research need to be further investigation in future.

Thirdly, some powerful actions must be taken to protect the water environment. Recent years, global water resources have been strongly polluted following the rapid industrial manufacture, not only in freshwater but also in seawater. Meanwhile, polluted water usually leads to amount diseases outbreak, and so the food security have become a hot topic in our life. Thus far, how to make sure the quality of the aquatic product is the most important thing for us.

Lastly, the aquaculture production need more effective management including culture plan, offspring breeding, disease prevention, feeding management, transport management and product quality control. All these sections need to be improved faster to ensure the goal come true.

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