

# PERSPECTIVES ON AQUACULTURE 1

## How accurate are future predictions of the growth in shrimp farming?

Recently a prominent NGO involved in certification announced that they expect to see a large increase in the amount of farmed shrimp being produced annually over the next few years. These types of predictions rarely ring true as they do not take into account global market dynamics, the widespread lack of proper biosecurity approaches and the spread of "new" diseases globally. I believe that as the global production paradigm shifts away from low density production in dirt ponds to higher density production in lined ponds with much tighter biosecurity we may see a potential increase in productivity.

However this does not mean that the average consumer of farmed shrimp will automatically increase their consumption. The factors that impact the pricing of the product to the consumers are not controlled by the producers. They are controlled by those in the middle between the farmers and the consumers. The majority of shrimp that is currently farmed comes from a small number of countries. In South America, Ecuador with a very low density production model, is the leader. In SE Asia, where corporate farms are not the norm and small producers are the primary producers, India, Indonesia and Vietnam are the large producers. Most farmers have little to no control over their costs of production.

The wide spread availability of Specific Pathogen Free (SPF) *Litopenaeus vannamei* broodstock has had a large, typically positive impact, on the success of farmers. This is however not without problems. Disease outbreaks are still a common feature of shrimp farming in most places and there is little reason to believe that this will change. Too many people mix wild or farmed non-SPF broodstock with SPF animals. No one spawns animals individually and no one screens individual broodstock. Post larval shrimp are the major source of the introduction of pathogens into production systems. Farmers all too often are taken advantage by local PL producers and have no options to go elsewhere.

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Shrimp feed manufacturers proliferate with, unfortunately, a great deal of variability as to the quality of the raw materials and thus feed performance. Excessive protein levels are legally mandated in some countries and the widespread lack of use of automatic feeders ensures that shrimp are often underfed and that feed is wasted. Feeds that depend on high quality fish meals continue to increase in price. Viable protein alternatives are slowly being developed although many will cost more than fish meal does. Not only that, in many countries, the only credit available for feed is through third party companies that buy and resell the feed at high margins to farmers for after crop harvest payment.

Finally, the market is limited in scope. China has not been able to produce enough farmed shrimp to satisfy local demand and until they address their environmental issues and move from the typical small stakeholder farms to consolidated and vertically integrated corporate farms this is not likely to change. Moreover, the markets in China, the USA and the EU are not large enough to absorb the large volumes of farmed shrimp that are being predicted.

It will take a drop in price, which is simply not an option for most producing nations, as a drop in price can only be a result of a drop in the costs of production along with a concomitant and generous increase in demand, for these predictions to be realized. Both the EU and the US could increase consumption if the will was there. Based on historical rates of consumption however, there is no reason to believe that this can or will rapidly change.

I remain convinced that any significant short term future growth in the availability of farmed shrimp will not occur. At this time shrimp prices are well below the levels seen in prior years. This is widely held to be a result of supply far exceeding the demand. Until this changes, the predictions of the NGO's are overly optimistic.