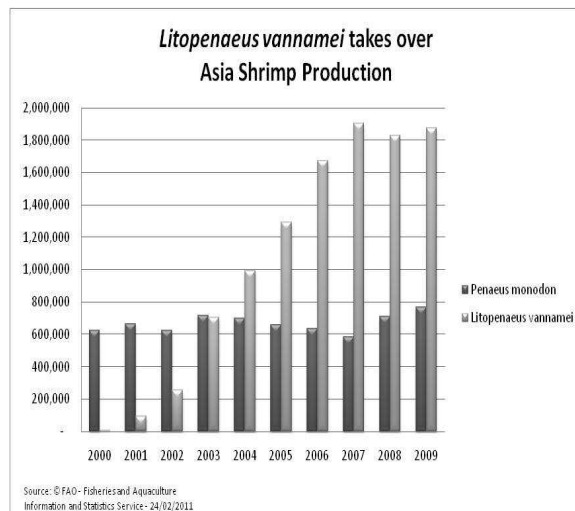


## ***Litopenaeus vannamei* Selective Breeding and Its Impact in Asia Shrimp Production**

Oscar L. Hennig  
Shrimp Improvement Systems Hawaii LLC  
[oscarh@pabllc.biz](mailto:oscarh@pabllc.biz)

The production in Asia of *Litopenaeus vannamei*, a non indigenous species there, went from 2,310 metric tons in 2000 to 1,875,542 metric tons in 2009. In comparison, the production of *Penaeus monodon*, the main culture species through 2003 and indigenous to Asia, increased only 22.8% for the same period (623,194 metric tons in 2000 to 765,346 in 2009; FAO - Fisheries and Aquaculture Information and Statistics Service - 24/02/2011).

The shrimp farming industry in Asia was faced with instable results with *P. monodon*. That was mainly due to the introduction of diseases in the farm environment from the use of wild broodstock. Asian shrimp farmers were able to take advantage of Specific Pathogenic Free (SPF) genetically improved *L. vannamei* broodstock readily available from growers in the USA. Having a bio-secure infrastructure in place was one of the key elements for securing *L. vannamei* success in Asia. Another major factor was the lower cost of production: about ½ when compared with *P. monodon*.



Shrimp Improvement Systems (SIS) was founded in 1998 in Islamorada, Florida (USA). The purpose of the company is to conduct a commercial genetic improvement program for Specific Pathogen Free (SPF) stocks of *L. vannamei* using established techniques of selective breeding already used widely in other agribusinesses. SIS currently has three locations around the world: Florida; Singapore and Hawaii.

In 2006 SIS was acquired by Central Proteina Prima (CPP), a large, vertically-integrated shrimp aquaculture group. SIS supplies CPP farms in Indonesia with broodstock but also supplies external customers in Asia and the Americas with same quality stocks.

In order to take advantage of SPF genetically improved stocks, bio-security, feed, and pond management are critical factors.