



## Importance of Pedigreed Breeding Programs for Shrimp Aquaculture in China: An Industry Perspective

**Dr. Anthony C. Ostrowski**  
Chief Scientific Officer  
SINO AGRO FOOD, INC.  
China



### Abstract

China is the world's leading shrimp aquaculture producing nation, generating over 1.0 million metric tons of Pacific white shrimp (*L. vannamei*) in 2016. Yet the industry is facing severe challenges in sustaining future growth, due in large part, to the absence of any robust domestic and pedigreed, selective breeding program for this species. China is still currently reliant on imported broodstock of unknown pedigree. Attempts to create domestic programs from imported stocks have resulted in severe inbreeding depression within just a few generations, limiting any attempts to generate lines uniquely bred for China's specific environmental conditions and ultimately, self-sufficiency of the industry. A historical industry perspective of the development of the world's first pedigreed breeding program for *L. vannamei* in the USA will be presented, with impacts to the world and Chinese aquaculture industries. An outline of the methodology towards development of a pedigreed program for shrimp will be presented, and steps China needs to take to become self-reliant will be discussed.

### Biography

Dr. Ostrowski is Chief Scientific Officer (CSO) at Sino Agro Food, Inc., a specialized investment company focused on protein food that operates in the People's Republic of China and is incorporated in the United States of America. He has over 30 years' experience as a researcher and senior executive in the field of aquaculture. He was lead scientist on multi-million-dollar research projects in the United States, director and executive committee chairman of a national, multi-state, multi-institutional shrimp research consortium, and led the internationally recognized aquaculture research and development organization, Oceanic Institute in Hawaii, USA, as president and CEO from 2009-2012.

Dr. Ostrowski began working in China in 2013 as CEO of a Chinese subsidiary located in Yangjiang, PRC, focused on selective breeding of marine shrimp. He has contributed over 100 publications and presentations in all aspects of marine fish and shrimp aquaculture, and has served on several boards and technical committees within the aquaculture community providing both scientific and strategic directions that helped establish domestic and international standards for the field. He is passionate about the sustainable development of aquaculture to supply the protein needs of a growing world population. Dr. Ostrowski obtained his Bachelor's degree from the Pennsylvania State University and Master's and Ph.D. from Michigan State University, with an emphasis on aquaculture nutrition. His home is on Oahu, Hawaii, USA, and is currently stationed with SIAF in Zhongshan, PRC.

BIT's 8<sup>th</sup> World Gene Convention - 2017

13-55 November 2017 • Macao, People's Republic of China