

AQUACULTURE FRONTIERS

PART 3: SHRIMP, IN SEARCH OF ORDER (AND PROFIT)



Shrimp farmers are in crisis due to an oversupplied market. Despite the slump, several top producers are optimistic that the shrimp industry has a promising future and are building high-tech farms and finding solutions to major health challenges.



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REPORT SCOPE

Writing a report on the global shrimp industry is a tough challenge. The industry lacks the authoritative supply leadership that Norway wields in the salmon market. Statistics are hard to come by and even disease outbreaks are sometimes kept away from public view. We started the process of writing a report by visiting top producers in Southeast Asia, China, and South America to get under the shell of this industry. We discovered an industry of two parts. One part consists of the many thousands of small farmers in Asia that are susceptible to disease outbreaks and are now suffering from a prolonged spell of low prices. Unlike the salmon industry, shrimp farming offers low barriers to entry to budding entrepreneurs and thrives in countries with a low GDP per capita. India, with a mix of abundant coastal land and cheap labor, has thrived in this market. The other half of this producer universe is

made up of larger companies that have invested in high-tech farms designed to serve larger customers. They also offer improved biosecurity and might better cope with disease. We attended technical conferences to understand how the industry can better cope with disease through improvements in feed technology, genetics and pond management. Shrimp, despite the slump, is still one of the world's fastest growing protein sources and immensely popular in China. With new products, from the McDonald's shrimp burger (currently sold in Japan and South Korea) and Charoen Pokphand Foods' (CP Foods) shrimp dumplings, the industry might yet have a promising future. The key, experts say, is to solve major disease challenges and convince consumers that shrimp can be farmed responsibly without major damage to coastal lands and labor abuses of the past.

INTERVIEW LIST

- Industrial Pesquera Santa Priscila
- Operadora y Procesadora de Productos Marinos Omarsa
- Kona Bay (Hendrix Genetics)
- Global Aquaculture Alliance
- NTSF Seafoods Group
- West Coast Group
- Viet Uc Seafood Corporation
- Sustainable Shrimp Partnership
- Charoen Pokphand Foods
- Thai Union Group
- Vietnam Association of Seafood Exporters and Producers (VASEP)
- Arizona University
- ShrimpVet
- Delta Blue Aquaculture
- Benchmark Holdings
- VV Marine Products
- Taprobane Seafoods
- Sustainable Fisheries Partnership
- Procesadora y Exportadora de Mariscos (Proexpo)
- Grupo Lamar
- Camposol
- BioMar Group
- Veramaris
- Gfresh
- Rabobank
- Camara Nacional de Acuicultura (Ecuador)
- IDH (Sustainable Trade Initiative)
- XpertSea
- Calysta
- Seafood Trade Intelligence Portal
- Skretting (Nutreco)
- Sociedad Nacional de Galapagos (Songa)
- Greene Prairie
- Zhanjiang Guolian Aquatic Product

CHARTS + ILLUSTRATIONS

- Factsheet with global supply + demand statistics
- Top producing countries + exporters
- Shrimp supply + demand equilibrium
- Chinese shrimp supply estimate
- Southeast Asia shrimp growth versus GDP per capita comparisons
- Indian shrimp output
- Indian land availability for aquaculture
- Ecuador and Latin America supply growth
- Ecuadorian price averages for large companies versus national average
- Guide to global shrimp diseases
- Virtuous and vicious cycles in the shrimp industry
- Vietnam shrimp feed outlook
- Extensive, semi-intensive and hyper-intensive systems
- Mitsui's M&A push into shrimp
- CP Foods study of countries with premium prices
- Bangladeshi black tiger shrimp exports decline
- Guide to certification programs & partnerships

Ecuador: big vertically integrated companies command price premiums

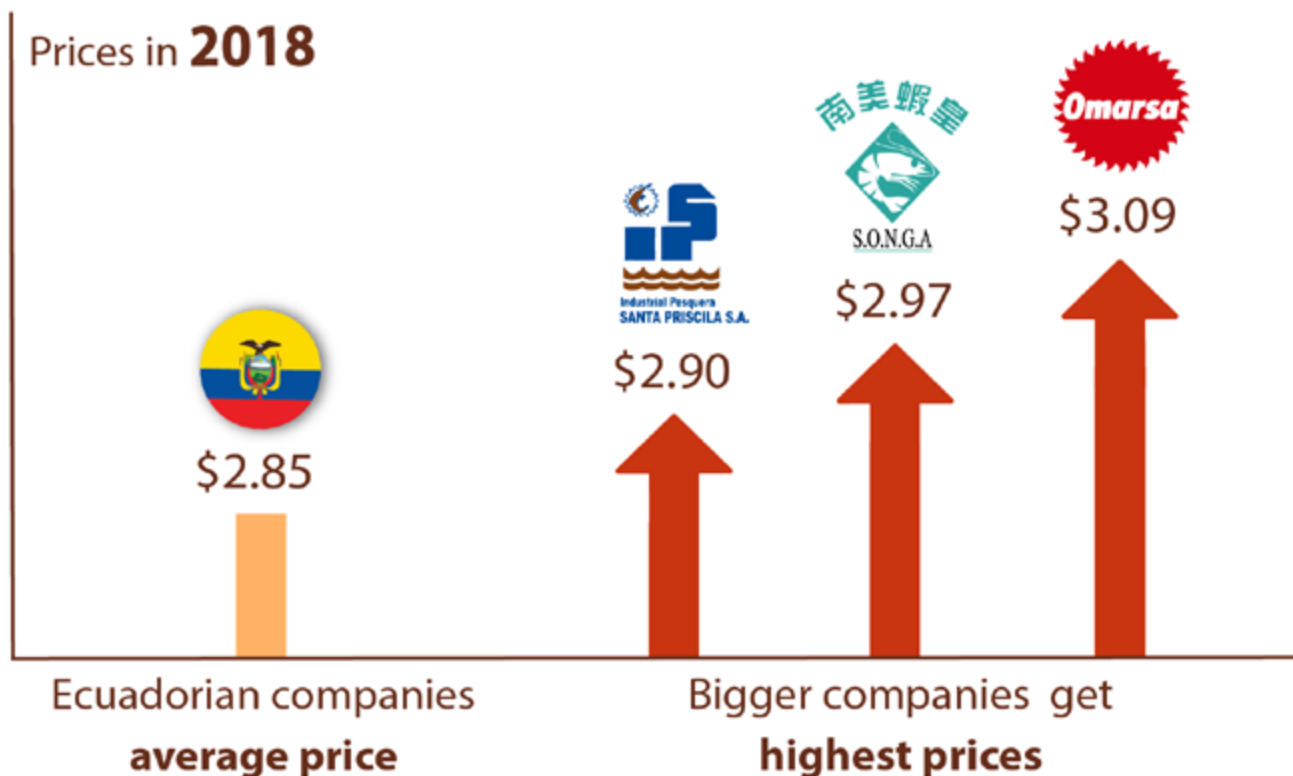


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We assess if the shrimp industry has reached a position of structural oversupply. Can China absorb large volumes of new supply coming out of India and Ecuador? Will conventional commodity supply-and-demand logic put farmers out of business? We provide an overview of the global market before delving into specific regions.

Page 17 - Chapter 2: China's transformation

Chinese consumers are becoming shrimp connoisseurs, preferring Ecuadorian and Argentine red shrimp over domestic supply amid health concerns. We examine efforts made by major players such as Guolian Aquatic to build a new supply chain in China and win back consumers trust. We also assess the potential for more Chinese farms to close, and study the divergence of opinions over true Chinese production estimates.

Page 24 - Chapter 3: Southeast Asia: new leadership

Viet Uc, the biggest Vietnamese hatchery, is embarking on a major expansion into farming, using the latest technology to drive standards upwards in this major Southeast Asian exporter. CP Foods of Thailand is taking a similar route, building a massive indoor farm near Bangkok. We assess if Southeast Asia can reposition itself in the global shrimp supply chain.

Page 26 - Chapter 4: Will India keep growing?

We go granular on the Indian market, assessing the future of the shrimp farming hub of Andhra Pradesh. We visited Gujarat, an up-and-coming production area, to assess the potential for more supply reaching the market. And we assess if India will become the world's main shrimp exporter.

Page 31 - Chapter 5: Ecuador – intensification and sustainability push

Ecuadorian farmers are gradually boosting output per hectare by using more power-intensive aerators and new feeding methods. We assess how much more capacity can be built in this relatively compact South American nation. We also provide an assessment on other Latin American producers.

Page 37 - Chapter 6: New era for disease management

Disease is the main weakness of the shrimp industry. We assess efforts to manage pathogen outbreaks. We analyze ways that technology has improved pond management, leading to a reduction in disease outbreaks. And we assess how collaboration between small farmers can lead to further improvements.

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Cargill, Nutreco's Skretting and Biomar are betting big on their ability to help the shrimp industry expand, become more sustainable and cope better with disease. We provide insight into modern feed formulas and the emergence of new ingredients that can make the industry more sustainable. And we look at how feed companies are vying with start-ups to provide producers with mobile apps to manage farms.

Page 49 - Chapter 8: High-tech farms

Some companies are building larger, high-tech farms that offer greater control over key operational factors such as temperature, salinity and pH levels. We assess if larger scale facilities can offer better operational statistics and ultimately improved economies of scale. We profile Camposol, a Peruvian producer that is capturing the attention of the global shrimp industry through its intensive farms in South America.

Page 53 - Chapter 9: Big newcomers

Mitsui and Cooke, two major players in the seafood industry, are investing for the first time in shrimp. We assess what they see in this market. Mitsui has been slowly investing in traceable supply systems since 2007 and appears to be seeking a foothold in both the Ecuadorian and Vietnamese markets. Cooke brings a wealth of experience from other areas of the seafood industry and could be on the verge of another deal.

Page 57 - Chapter 10: Black tiger bounce

The favored shrimp of discerning Japanese and Spanish consumers, some Asian farmers are switching back to black tiger production to avoid the slump in vannamei prices. We assess the magnitude of the switch to black tiger production and what effect this will have on prices. We profile Bangladesh, where processors have long fought for regulators to allow vannamei farming.

Page 60 - Chapter 11: Marketing sustainable shrimp

The industry has historically been plagued by human rights abuses and sustainability concerns. In response, Ecuador has struck out on its own with its Sustainable Shrimp Partnership (SSP), which provides an antibiotic-free label to shrimp. We speak to industry stakeholders to find out how they are attempting to improve shrimp's reputation and assess the current initiative to create a marketing alliance in the United States marketplace.

Page 66 - Predictions

EXECUTIVE SUMMARY

If the aquaculture universe were divided into regions, the shrimp industry would be the Wild West.

In virtually every tropical country from the 38th parallel north to the 38th parallel south, families have made fortunes, and equally lost their shirts, farming the world's favorite crustacean.

With the salmon market, Norway neatly controls about half of global supply and leads scientific research and marketing efforts for the species. The next biggest producer, Chile, is now aligning with Norway after some disruptive production swings in the past. Norway even sent its Royal Family to Patagonia to strengthen the alliance.

None of that cohesion exists in the shrimp market. India, the largest exporter, only started shipping vannamei shrimp overseas in 2010. Ecuador, Vietnam, Indonesia and China are other significant players, but no single country wields the control that Norway has in salmon. And no one producing country invests anything close to the capital that Norway does in research & development into salmon farming and marketing.

China, with its rapidly growing middle class, has turned from a major exporter into a net importer of shrimp. With low growth in Europe and the United States, strong Chinese demand is the glue that binds this unruly market together. Ecuadorian farmers have enjoyed a boom in recent years on Chinese demand and preferential market access. Furthermore, many farmers in China and Thailand have quit the market, allowing lower cost producers in India to fill the gap.

In China, shrimp is eaten for breakfast, lunch and dinner, and even snacked on sugared candy. But now, it seems that the party is over. China's demand is still robust, but supply increases have outpaced those gains. Despite its status as the most menued seafood item in US restaurants with 65% market share, demand in US eateries fell 1% over the past four years, compared with 7% growth in salmon and a

27% increase in ahi tuna, according to market consultancy Changing Tastes. Demand growth in Europe, the biggest importing region, is weak.

Animal welfare in particular is a growing concern among millennial consumers in Europe and North America. Consumers avoid eating animals grown with antibiotics or farmed in unethical ways, said Travis Larkin, head of the Seafood Exchange. Many small Asian farms, unlinked to certification schemes, rely on antibiotic treatments to stay in business.

Shrimp's tainted image is why Ecuadorian producers decided to break away from the pack in 2018 and form an alliance, marketing antibiotic-free shrimp from the South American country's low-density ponds. The country wants to exit "a race to the bottom," competing with Asia in uncertified commodity markets, said salmon marketing guru Avrim Lazar, who now heads the Ecuadorian effort. The group began its first sales this year. But this is a market where most major buyers are used to paying rock bottom prices and do not require certified or traceable shrimp. It remains to be seen if Ecuador gets a premium.

Southeast Asian producers have little chance in replicating the Ecuadorian model because land is too expensive and there are many more players, per hectare. Most of Ecuador's producers started business in the 1970s when land was cheap and they can afford to run low-density farms.

Public-private initiatives, including the Sustainable Fisheries Partnership (SFP) and IDH (Sustainable Trade Initiative), are beginning to take on the challenge of improving Asian farm management. Southeast Asia, including India, will drive increases in global supplies rising by 5.7% a year between 2017 and 2020, according to a consensus of forecasts given at the Global Outlook for Aquaculture Leadership (GOAL) conference in Guayaquil, Ecuador last year. Demand is expected to grow at a lower rate, even with a robust Chinese market.

EXECUTIVE SUMMARY

Farmers of all sizes will find it increasingly difficult to sell to developed markets without a traceable supply system.

Many smaller farmers have been helped by improvements in pond management including basic diagnostic tools, better feed, and pond toilet technology, according to Arizona University aquaculture expert Kevin Fitzsimmons. But smaller farmers are still ill-prepared for major disease outbreaks that can affect large regions with devastating consequences, according to the SFP.

As major global retailers require better supply chains, bigger producers are investing in new indoor or covered systems featuring recirculating technology where predictability is high and traceability can be offered. Viet Uc, the largest supplier of post-larvae in Vietnam, has started to build its own ultra-modern farms. It insists that rather than competing with its customers, the company is building a new layer of sustainable supply that is attractive for major retailers in developed markets.

As small-scale shrimp entrepreneurs in countries with rising prosperity such as Malaysia and Thailand give up farming, this slack might eventually be covered by larger new entrants. Cooke, a major global seafood firm, entered the shrimp space last year by purchasing two Central American companies. More seafood giants and other actors in the animal protein industry are expected to enter the market. Mitsui is negotiating to acquire minority stakes in major players in Ecuador and Vietnam.

India is expected to keep expanding supply by converting vast areas of coastal land to shrimp ponds and utilizing cheap labor. Future aquaculture systems have to show that they can avoid disease and avoid deterioration in order of natural habitats and water systems, said Robert Jones, the global aquaculture lead for the Nature Conservancy's Sustainable Aquaculture program. Without that adaptation of the shrimp industry, the future looks bleak.



REPORT AUTHORS

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Matt Craze started Spheric Research in 2017 to provide analysis and business solutions to the seafood and food industries. Matt is a regular contributor of articles on global seafood trends for Undercurrent News.

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SPHERIC RESEARCH

Spheric Research provides research and consultancy services to the global seafood industry. The company is currently publishing a series of reports, Aquaculture Frontiers, that provide a comprehensive snapshot of the industry in 2019. The reports have been created in partnership with Undercurrent News.

UNDERCURRENT NEWS

Undercurrent News was started by Eva Tallaksen and Tom Seaman in 2012 and has become an authoritative voice in the seafood industry. Undercurrent places an emphasis on high quality journalism and sends reporters to key trade shows and industry seminars around the world.