



Building a Better Shrimp, Naturally

by Heidi Blalock

Marvesta utilizes a zero-exchange aerobic heterotrophic system for growing shrimp.

"Anyway, like I was sayin', shrimp is the fruit of the sea. You can barbecue it, boil it, broil it, bake it, sauté it. Dey's uh, shrimp kabobs, shrimp creole, shrimp gumbo. Pan-fried, deep-fried, stir-fried. There's pineapple shrimp, lemon shrimp, coconut shrimp, pepper shrimp, shrimp soup, shrimp stew, shrimp salad, shrimp and potatoes, shrimp burger, shrimp sandwich. That—that's about it.

—Bubba Blue, from the movie "Forrest Gump"

Class of '98 grads Guy Furman and Scott Fritze smile and shrug their shoulders. *Yeah, they've heard the "Forrest Gump" reference*—in fact, many, many times since starting Marvesta Shrimp Farms in 2002. A bio-secure, sustainable shrimp farm located in a five-acre industrial park on Maryland's Eastern Shore, Marvesta specializes in providing fresh, never-frozen, antibiotic- and hormone-free shrimp that's available 365 days a year. Like Forrest's pal Bubba, the pair, along with their business partner, Andy Hanzlik, have pinned their hopes, and futures, on America's gustatory obsession with the "fruit of the sea"—and something else: the public's growing concern for the environment.

Marvesta is Furman's brainchild and the company draws heavily on his scientific background and expertise. A bioengineering major at Cornell, he drew inspiration for his master's thesis—an economic analysis of a hypothetical shrimp farm—from his advisor, a founder of a high-tech tilapia farm. In June of 2002, having completed both his undergraduate and master's degrees—including courses in business and entrepreneurship—in four years ("I took way too many classes each semester, often at the expense of my grades and my sanity"), he shared his shrimp research with Fritze and Hanzlik, both finance majors at Bucknell, and proposed that the three of them start a company.

Fritze had been working in NYC, writing turn-around business plans for troubled Fortune 500 companies. Recalling his initial reaction, he admits, "I had plenty of reservations about entering a field grounded in marine science, but I trusted Guy's analysis of the science and engineering and knew from my background that the business opportunity was far too exciting to pass up."



Guy Furman '98 completed both his undergraduate and master's degrees in bioengineering in four years. "I took way too many classes each semester, often at the expense of my grades and my sanity," he told students in Bill Hilgartner's Upper School biology class during a campus visit in November.

The three spent 18 months developing a business plan and secured a commercial loan, with help from their parents, to build five tanks capable of producing 50,000 pounds of shrimp per year. Five years into the venture—and many hard-learned, and costly, lessons behind them—the company is presently undergoing its third expansion. The partners have hired their first employees and have added facilities, including 12 new grow-out tanks plus storage and indoor plumbing (“We’ve been using a Port-O-Pot for the last five years,” said Furman), to increase annual production five-fold. Furman continues to modify and perfect growing systems and other technical aspects of the business. Fritze and Hanzlik arguably have an even greater challenge: tapping the enlightened palate—both culinary and environmentally—by introducing chefs and greengrocers to their 21st century shrimp.

“Most people have never tasted or prepared truly fresh shrimp. I know I hadn’t,” says Fritze. Chefs and foodies, however—those who cook for and frequent high-end restaurants—know the difference. And it is they who comprise Marvesta’s target audience. (Its retail division, selling directly to consumers, accounts for 10 percent of its sales through the Internet.) During sales calls, Fritze and Hanzlik visit area chefs with tanks of live shrimp in tow for them to sample. The pitch has worked beautifully, according to Fritze. “Every single chef we’ve approached with our product and our mission has become a client,” he says. In return, restaurants include Marvesta’s name on the menu—a move that not only adds value to the brand, he explains, but provides an opening to educate diners about their unique, locally-grown product. “We’ve trained the chefs and some of the servers to answer patrons’ questions about our shrimp,” says Fritze. “Many chefs, like Spike Gjerde of Woodberry Kitchen, are emphasizing local ingredients on their menus, so our product is a perfect fit.”

Marvesta shrimp prices are higher than those for pre-frozen shrimp, but the quality and taste are far superior, Fritze contends. “By offering a naturally-raised, gourmet product at a



The three Marvesta partners—Scott Fritze '98, Guy Furman '98, and Andy Hanzlik—stand in front of their ecologically-friendly shrimp tanks.

competitive price, our product is an excellent alternative to other shrimp,” he says. “Right now we know there’s a limitless market for us.”

Americans eat more shrimp than any other seafood. Between 1980 and 2005, the amount of shrimp consumed annually in the U.S. tripled, from 1.4 pounds per person to 4.1 pounds per person, according to the National Oceanic and Atmospheric Administration. Yet, for all we peel and eat, we rarely know where our shrimp comes from. According to the World Trade Organization, most shrimp consumed in the U.S. is imported from six countries—Brazil, China, Ecuador, India, Thailand and Vietnam. With few environmental regulations in place, these countries have cleared an estimated 3.7 million acres of tropical mangrove forests—destroying important habitats for fish, birds and humans—to build coastal shrimp farms. These facilities, comprised of a series of ponds, generally a meter deep, can easily

breed disease from fish and overflying birds, which can then spread quickly from pond to pond.

“Because the farmers operate on such a low price point, they’re forced to use antibiotics and hormones to prevent or curb outbreaks,” says Furman. “Effluent from the ponds is discharged back into the ecosystem. Once ponds become diseased, instead of cleaning their facilities, farmers pick up and move, and dig new ponds—and the cycle repeats itself.”

Outdoor ponds similar to those found in Asia still exist in the Florida region, but most are going out of business, according to Furman.

Trawling techniques in open water are also problematic for the environment because of sea bed damage and danger to sea turtles and other by-catch. In recent years, the U.S. Fish and Wildlife Department has implemented measures to prevent over-fishing and limit the

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Guy Furman '98 harvests shrimp in one of Marvesta's tanks.

environmental damage of trawling. As a result, fresh shrimp—both farmed and wild varieties—is available in the U.S., but only on a seasonal basis.

Marvesta is located in the town of Hurlock in Dorchester County, some 40 miles inland from the Atlantic Ocean, and utilizes a zero-exchange aerobic heterotrophic system for growing shrimp.

“Basically, it means we don't pump water out of the system and into the environment,” says Furman. While there are currently no USDA organic standards for aquaculture, Marvesta is seeking certification from several recognized organizations, including the Aquaculture Certification Council (ACC) and the Global Agriculture Alliance (GAA). It is also exploring the use of renewable energy to heat

its tanks—further extending its green appeal. (Shrimp prefer water temperatures in the mid-80s.)

Because the indoor tanks are aerated and temperature-controlled, they simulate the perfect environment in which to raise and harvest shrimp on a daily, not seasonal, basis—with none of the environmental or health hazards. When one considers that the Marvesta system can be replicated in other major markets, such as NYC or Boston, it's little wonder why Furman and Fritze are so optimistic.

“I think we see ourselves growing and expanding this business throughout the U.S. and possibly abroad,” says Fritze. “Our goal was to create a replicable system that we could put in or around any market we deemed large enough for one of our facilities. Over the last four years, we've eliminated the barriers that slowed production. The fun part is now expanding the business and exploring the numerous opportunities that present themselves.”



Shrimp tidbit:

Furman and Fritze recommend serving their shrimp with the head on, which contains flavorful fat. Their simple recipe: De-shell bodies, keeping the heads on. Toss with olive oil, add salt and pepper to taste, pan sear for 30-45 seconds, flip and enjoy.

Marvesta shrimp are now served at these fine restaurants in Baltimore and Easton, MD:

Out Of The Fire—Easton, MD
Restaurant Local—Easton, MD

Woodberry Kitchen—Baltimore, MD
Gertrude's—Baltimore, MD

Marvesta plans to add approximately 20 restaurants each in the Baltimore and DC areas in late summer 2008. Shrimp lovers can visit the website—www.marvesta.com—or join the company's e-newsletter to be kept abreast of restaurants and availability.



Scott Fritze '98 brings a finance and marketing background to the partnership.