

Kenneth Morrison Honored With GAA Lifetime Achievement Award

Farming and aquaculture

pioneer Kenneth Morrison received the first Global Aquaculture Alliance Lifetime Achievement Award during GAA's Global Shrimp Outlook: 2004 meeting in Bangkok, Thailand. The GAA Program Committee selected Morrison for his enduring contributions to the farmed seafood industry and long-term commitment to efficient, sustainable production.

During his long career, Morrison has developed successful large-scale businesses in grains, hogs, cattle, fishmeal, and Alaskan fishing. He has pioneered developments in shrimp pond growout, hatchery, feed manufacturing, and harvesting. He has owned operations throughout the United States, as well as in Canada, Chile, Guatemala, Ecuador, Argentina, and Malaysia.

Ken Morrison's story is that of a hard-working entrepreneur who applied the efficiencies of production agriculture to a wide range of businesses, including shrimp farming.

Young Entrepreneur

Morrison grew up on a farm in Kansas, USA, where he recalled first working at the age of 6. "My job was to guide a temperamental work horse back and forth as its harness lifted bales of hay into the barn," he said. When Morrison reached his teens, his father sent him out to negotiate his first deals for livestock and grain.

A high school teacher remembered Morrison as a star basketball play-



GAA Vice President Bill Herzig presented the achievement award to Morrison during the Global Shrimp Outlook: 2004 meeting in Bangkok.

er who, along with his brother, Milton, occasionally fell asleep in class. "I didn't complain much," the teacher said, "I knew they were good boys who had been working" on the farm before and after school. The Morrison brothers remained lifelong partners.

Move Into Agribusiness

Kenneth and his late wife, Marjorie, moved to Nebraska in the 1940s. He saw his first major opportunity in the production and dehydration of alfalfa. "In those days, alfalfa was an important ingredient in most animal feeds," Morrison said. "Eventually nutritionists discovered its unidentified growth factors and succeeded in reducing its use by incorporating trace elements."

During the 1950s, the Morrison

brothers developed further farming enterprises in the U.S., Canada, and Central America. They built large grain elevators in several states and bought large tracts of land in the Mississippi Delta on which they developed fully integrated farms.

Morrison also established large turf farms that sold sod to Yankee Stadium, the World's Fair, and the ever-expanding residential communities of the U.S. While producing and processing potatoes in Oregon, one of his companies developed a patent for the production of "long-string French fries."

Throughout his ventures, Morrison's business approach was simple: Improve efficiency and drive down the costs of production. The Morrises had "no interest in being the biggest operators – just the most profitable."



Ken Morrison's early experience with large-scale agriculture grew to include aquaculture operations in Latin America and Asia.



Morrison's hog operations effectively recycle animal waste as fertilizer on surrounding fields of row crops.

The Morrisons had “no interest in being the biggest operators – just the most profitable.”

Fishmeal, Biosecure Hog Production

Past expertise in alfalfa drying led Morrison into the new business of fishmeal production in the 1960s. He and a partner built a fishmeal factory in northern Chile, and eventually owned a fleet of fishing boats to supplement the supply of raw material from local fishermen. That experience in high-seas fishing led to later investment in Alaskan fishing vessels operating in the Bering Sea.

In addition, Morrison has long been in the hog and cattle-feeding business. In the 1990s, he expanded pork production with two 5,000-sow hog facilities complete with their own feed mills. He later added a hog genetics business.

These facilities are models of environmental sustainability and biosecurity. Waste from the hog lagoons is used to fertilize surrounding fields of row crops with a pivot sprinkler. Vehicles entering the complex are disinfected in specialized buildings, and personnel shower and change clothes before entering production facilities.

Shrimp-Farm Innovations

Morrison's involvement with shrimp farming started in Ecuador in the late 1970s. At the request of a

banker, he arranged a stopover in Ecuador on his way to Chile to look at a large farm that was for sale.

“I spent the whole day looking at fields of cotton, bananas, and pineapples, but I wasn't too impressed,” Morrison said. “Then I noticed boys dipping postlarval shrimp out of the estuary and stocking them into a pond. I thought, ‘That looks like an easy way to make a living.’”

Pond Technology

Morrison recognized the potential, so he and his brother constructed a shrimp farm and invested in a processing plant. They eventually expanded to several farms with 1,500 ha of pond water surface producing over 2,700 mt/year.

Among other innovations, the two showed that ponds could be built on high ground well above the mangrove belt. In fact, their largest farm was a model of irrigation technology with pump stations that lifted water to progressively higher sections of land.

They introduced agricultural tractors and farm implements to till the pond bottoms between crops. Morrison also installed an acclimation nursery and outfitted some ponds with aeration for intensive culture.

First Hatchery

Early Ecuadorian shrimp farms relied on the sporadic availability of wild postlarvae to stock ponds. Morrison recognized the need for a reliable year-round supply of postlarvae that would improve efficiency and environmental sustainability. Only a handful of research groups worldwide had succeeded in controlling shrimp reproduction, so he traveled to Tahiti, where he contracted France Aquaculture to build a state-of-the-art, large-scale hatchery in Ecuador.

A remote site where the desert meets the Pacific Ocean south of Salinas was chosen to build Sema-cua, the first commercially successful hatchery in Ecuador. The skilled French technicians soon induced reproduction of *Penaeus vannamei* in captivity and developed techniques for artificial insemination. Eventually, hundreds of other hatcheries were built along that same isolated stretch, which today is known as “hatchery row.”

Feed Manufacturing, Application

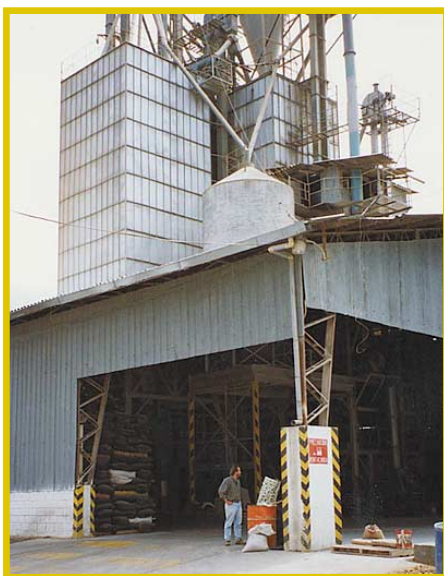
The Morrisons recognized that specialized shrimp feed was critical to success. Imported feeds were scarce and expensive, and local feeds were mainly poultry diets that quickly disintegrated in water. So the brothers built Alimentos Balanceados Animales, the first dedicated shrimp feed mill in Ecuador. It, too, was followed by many other shrimp feed mills.



When his fishmeal business outgrew its boats, Morrison built larger ones.



Another innovation: fertilizer and feed application by crop duster.



The Morrisons built both the first dedicated shrimp feed mill and first commercial shrimp hatchery in Ecuador.

Feed application saw another Morrison innovation. Ecuadorian ponds were generally about 20 ha in area, which made it a challenge to deliver feed and fertilizer evenly and efficiently. The Morrisons solved this by building a small airstrip and bulk bins beside their farm and distributing the pelleted feed and fertilizer by crop duster plane.

Harvesting, Processing

To supply the high-value French market with head-on shrimp, a system was needed to treat live shrimp with sodium metabisulfite at harvest to prevent melanosis within the heads. Capitalizing on his experience with commercial fishing and familiarity with combines for harvesting row crops, Kenneth adapted a live fish pump from the fishing industry as a component of a mechanical harvesting system.

The fish pump lifted the live shrimp from the pond drain to a dewatering tower, where they were deposited into baskets at one end of a long ice bath. The baskets were conveyed to the other end at a speed providing the optimal treatment time for metabisulfite.

The Morrisons also improved the efficiency and quality control of their processing plant when they installed roller graders, blast freezers, and cookers with brine freezing. As a result of these quality and efficiency improvements, their products were well regarded in the demanding French market.

GAA Founding Member

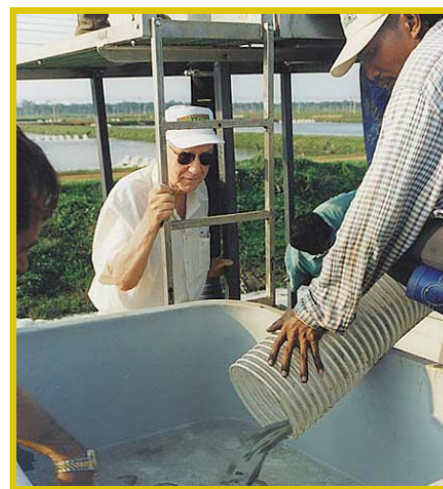
During their many years in Ecuador, the Morrisons adapted to a variety of disease and climate challenges, and gradually expanded operations that exported more than 4,500 mt/year. Morrison International joined the Global Aquaculture Alliance in 1997 as one of its first Founding Members and has maintained an active Governing Membership ever since.

The Ecuador operation was sold in 1998, when an El Niño weather pattern caused temperature and rainfall to rise and shrimp production to surge. Although many thought he was foolish to sell at such a lucrative time, they thought differently when white spot syndrome virus (WSSV) struck Ecuador the following year.

Farming in Malaysia

In 1999, Morrison decided to invest in an intensive shrimp farm in Malaysia that had been idle for two years due to repeated losses from WSSV. He was successful in managing WSSV by applying the principles of biosecurity made familiar through his experience in the hog business.

His team began by screening post-larvae for disease, filtering out carriers from the water used to fill ponds, and operating the farm with zero water exchange. To further improve survival and growth rate, Morrison invested in a state-of-the-art hatchery/quarantine facility, which devel-



Morrison adapted a pump from the fishing industry as a component of a mechanical shrimp-harvester.

oped some of the first disease-free *P. monodon* in Asia.

He contracted an environmental impact assessment and constructed a large sedimentation pond to minimize effluent nutrient load. He also invested in a mechanical harvesting system, renovated the on-site processing plant, and developed a traceability database.

Within five years, Morrison's shrimp business in Malaysia was consistently producing yields of 4-5 mt/ha/cycle, even through the monsoon season. It was recognized as one of the most advanced and successful farms in the region.



Morrison's many travels included a successful 1996 salmon fishing trip to Alaska.

Experience Continues

Kenneth Morrison's biggest personal diversions are attending University of Nebraska football games and international travel. But at 84, the tall, well-read man with a nearly photographic memory is still applying his practical, field-oriented approach to business as he works six or seven days a week at the Morrison Enterprises office building in Hastings, Nebraska, USA.

As Morrison guides the startup of yet another new shrimp venture, a breeding and hatchery management business for specific pathogen-free *Peneaus monodon*, one has to wonder how he has remained successful throughout the years.

"I suppose experience is a big part of it," Morrison said. "Experience teaches you to recognize a mistake when you have made it again. ... You also have to be willing to let go of a business when the time is right."