



COAST WATCH

Photo by Scott Taylor



Seafood
marketing

SEAFOOD S-A-V-V-Y

These days, dealers know more than fish. They're talking marketing strategy and watching supply and demand curves.

Four days of fishing at sea, and the crew and its catch finally reach the dock. For the fishermen, the work is over for now. For the fish, the journey has just begun.

What happens from the time that delectable seafood is swimming in the Atlantic to the time it graces your dinner table? A simplified itinerary might include stops at a packing house, a wholesaler, a retailer and finally, your table. Whatever the path, the chain of events is all part of the seafood industry.

By most indications, it's an industry on the rise. In 1965, the dockside value of North Carolina's commercial fisheries was estimated at \$9.2 million. In 1984, fishermen landed over 277 million pounds of fish and shellfish for a dockside value of \$57.3 million; the majority of those species were classified as seafood. Nationally, the seafood industry is worth a whopping \$2.4 billion.

One of the reasons for the industry's growth is the rising popularity of seafood. Last year Americans ate more fish and shellfish than ever before. Per capita consumption of seafood reached 13.6 pounds. We still have a long way to go before we catch up with countries like Japan where residents consume nearly 150 pounds of seafood each year, but with the current focus on healthful eating habits, experts say the trend will continue.

Sea Grant extension specialist Frank Thomas, a food scientist at N.C. State University, has observed the seafood industry in the state over the last 20 years. He says, "The interest in seafood is up several hundred fold. The nutritional consciousness we have now and the studies that support seafood consumption have boosted the industry tremendously. Twenty years ago, we harvested 55 species of fish and shellfish. Now, we're using 75 or 80 of our species. We're utilizing more of the resource today."

Along with the expanded industry has come an increased sophistication. Small fish houses still outnumber

Photo by Scott Taylor



Atlantic Beach shrimpers show off their catch

ber the large, but their owners know more than just fish. These days, talk of marketing strategy, supply and demand curves, and import quotas is likely to float over the seafood counter.

Even so, the seafood dealer still has to deal with the vagaries of the business: erratic supply, constantly fluctuating prices, and a market characterized by speculation and stiff competition.

The level of competition has prompted some in the business to label it "the last vestige of free enterprise." They say it's a business that's easy to get into, but hard to stay in.

The seafood consumer also has come of age. He wants to know more about the seafood he buys—where it came from, how fresh it is and why it costs what it does.

The marketing process holds the answers to all his questions. It actually begins when the fisherman leaves the dock. Ideally, he'll be in touch with the packing house while he's at sea. He radios ashore to let the packing house know what species and how much to expect.

In the meantime, the seafood dealer at the packing house is investigating the market, finding out how much of the species is already available and what it's selling for. With this information, he can determine

how much to pay the fisherman for his catch.

"You have to know what you can sell it for before you can figure out how much you can buy it for," says Jim Howell, manager of Clark's Seafood in Beaufort.

Doug Brady, vice president of Meridian Seafood that includes Ottis' Fish Market in Morehead City, spends most of each day on the telephone, calling up and down the East Coast to investigate the market. He knows that what's happening in states like New York and Maryland has an impact on the market in this state.

The fisherman docks his boat and unloads his catch by the basketful. There, the fish may be culled, sized and "cut"—processed by heading, gutting or filleting.

From here, the road from catch to consumption becomes less well-marked. Howell describes the various routes a fish might take: "A fish could go from the packing house to a retail market and then to the public. Or it could go from a packing house to a processor and from there to a retail market. Or it could go from a packing house to a processor to another processor and then finally to the public." Such is the complexity of the seafood market.

At each step in the marketing chain, the price goes up because each handler has to make a profit for himself. And everybody wants to make 20 to 30 cents per pound on the fish he handles, says Howell. But he adds that the price isn't arbitrary. "There's a market price out there. You can't just keep adding 10 cents to the price."

Most of Howell's sales are at the wholesale level. He says a wholesale price is really a discount price. "We're giving them a better price if they'll buy a bulk amount."

Howell establishes three price levels for his wholesale customers and charges them according to how far he has to ship the product, how much the customer buys, and how good a customer it is. Retail prices are generally higher because tax is added and because the product has been through more steps in the marketing process.

Nature often adds a little extra uncertainty when it comes to pricing seafood. Occasional gluts of a species can drive the price down since only a limited amount of fresh fish can be used at any given time. On the other hand, scarceness of a species can force a dealer to buy out of state to fill demand.

"A lot of dealing with fish is speculation," says Howell. "You play the seasons. In a glut, you put some fish in the freezer and hold it."

In the winter, for example, when finfish are plentiful, dealers often freeze a lot of species such as flounder, croaker and trout.

When supplies of a particular species are plentiful in this state and the price begins to drop, a dealer might ship his product to northern markets such as New York, Boston, Philadelphia or Baltimore.

The Fulton Fish Market in New York is the largest

seafood wholesaler in the country. Fulton information officer Richard Lord says the market deals with an average half million pounds of seafood each day and about 140 million pounds per year. In October 1984, the market sold over a million pounds in one day.

The sheer size of the Fulton Fish Market has resulted in the notion that it controls seafood prices along the East Coast. But Gary Van Housen, Sea Grant's seafood marketing specialist, says supply and demand control the price of seafood, and Fulton just mirrors supply and demand. Therefore, when prices increase dramatically, it probably indicates a tighter supply. If the price drops suddenly, it could mean there is a surplus supply.

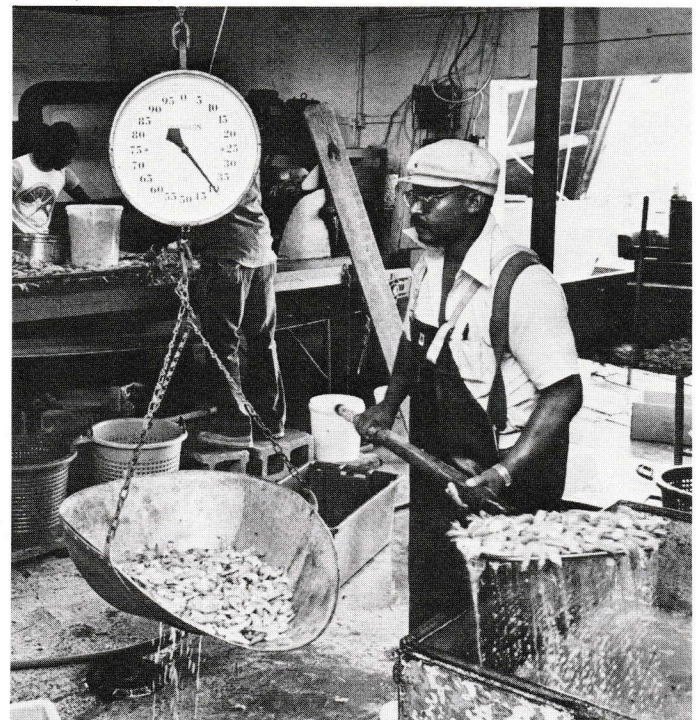
Because of the seasonal nature of most species and the fact that seafood is a perishable item, seafood prices are always volatile, says Lord. "Whiting, for example, can go from 10 cents a pound to \$1.25 a pound over the year."

In the past year, Lord has seen an increased interest in seafood. But in order for that interest to continue to grow, there must be more attention paid to quality, he says. "I still see a lot of horrible stuff sold. Unless every step in the chain takes care of the catch, it hurts the whole business. Fish has so many benefits. And humans have an innate sense of what is good to eat. People eat things that taste good, and fish only tastes good when it's fresh."

Brady is more optimistic about the market here. "The thing that will help in this state is that fresh seafood, from a consumer's standpoint, is finally coming of age. As that happens, the market will increase."

—Nancy Davis

Photo by Scott Taylor



One of the first steps in the marketing chain

North Carolina Gives Seafood a Promotion

With new marketing efforts, consumers are taking a bigger bite out of the state's fish and shellfish.

Photo by Scott Taylor



Fresh North Carolina seafood on its way to the market

Carol Stigelman threw another plump, peeled shrimp into the colander, checking to see if she had enough for her sushi workshop that afternoon. As seafood development specialist for the N.C. Division of Marine Fisheries, Stigelman cooks up business for the state's seafood industry almost as easily as she cooks a pot of shrimp. She's a salesman of sorts, marketing what North Carolina's fishermen bring to shore.

Last year, the state's commercial fishermen pulled in more than 277 million pounds of fish with a dockside value of about \$57 million. Their nets lay full of menhaden, shrimp, crab, croaker, flounder and many other species. Some of the fish were processed for meal or oils, but the majority of the species eventually found their way to the table.

In cooking terms, North Carolina's seafood industry is rapidly coming to a boil. Marketing has helped heat the pan. Although different in focus, the seafood development programs of the Division of Marine Fisheries and Sea Grant share the same goal of increasing consumption of fish and shellfish from the coast.

Stigelman promotes the product among consumers and retailers, while Sea Grant agents Joyce Taylor and Gary Van Housen take an educational approach to marketing. As the Marine Advisory Service seafood agent, Taylor shares tips on handling and preparing seafoods with the public. Van Housen, Sea Grant's seafood marketing specialist, works with fishermen and processors and advocates quality. Together, they cover the market, spreading the word on seafood.

Photo by Sarah Friday



Carol Stigelman

"North Carolina has such a variety," says Stigelman. "We are untapped to the limits we can go to promote it. We have a year-round source of seafood. There's very little time boats cannot go out and bring something back."

Having such an assortment of goods enhances the state's marketing efforts. And recently, increased consumer interest in seafood has been a boon to the industry.

"There's a national trend to buy seafood—a national trend for healthful foods," says Van Housen. "People in North Carolina are becoming more aware, as evidenced by fish markets being put in supermarkets. This gives us a responsibility to make sure we present seafood to the consumer in the best manner possible."

Teaching people about quality fish is Van Housen's key to promoting the state's seafood. "I believe that by increasing the quality of the seafood presented to the consumer, you're going to increase their desire to buy seafood," he says. "Once the retailer knows what good quality fish is, we hope he'll pay a higher price." This, in turn, should give the fisherman, the packing house and the wholesaler the incentive to take the extra care required to obtain high quality fish.

Taylor agrees that education and

marketing go hand in hand. "As you educate people about ways to use seafood, that in itself sells more. A lot of people don't buy seafood because they don't know what to do with it when they get it home."

She and Stigelman often answer requests for information and send out recipes that pass their kitchen tests. Since fish is nutritious and generally low in calories, consumers are more anxious to try it in new dishes, says Stigelman.

"The more people know about the different varieties of fish in North Carolina, the more they will be willing to try them," says Van Housen. "I try to promote seafoods that people aren't currently familiar with," like soft shell crab and squid. "I also try to promote local seafood caught in North Carolina such as bay scallops."

A typical day for Van Housen might include anything from explaining the characteristics of a fresh fish to a Raleigh restaurant owner to discussing onboard handling techniques with a fisherman. He also gives seminars and slide shows, talks to seafood buyers at supermarkets and restaurants, sets up displays at trade shows and works one-to-one with fishermen and retailers.

Buyers at retail fish markets often ask Van Housen's advice on purchasing fresh fish, where they can get quality fish and who are reliable dealers on the coast.

On the other side of the docks, Van Housen helps fishermen find markets for extra fish. He can put fishermen in touch with wholesalers other than the traditional ones in the North. Too, there seems to be a trend for fishermen to market their fish directly, says Van Housen. They come to him wanting to know shipping and packaging costs and the best handling techniques.

He and Stigelman frequently help fishermen truck, air freight or export their catches. (Van Housen has recently written a Blueprint, "Air Freighting Seafood from Coastal North Carolina," which is available from Sea Grant.) In addition, they often emphasize quality control to buyers and handlers of seafood.

Stigelman's methods of marketing are as numerous as the kinds of fish she promotes. Much of her time is spent traveling to supermarkets or meeting grounds to tell people what seafood is available and how it can be prepared. Six to eight times a year she goes to

out-of-state trade shows as part of the Gulf and South Atlantic Fisheries Development Foundation to show off the state's catches to restaurateurs, seafood buyers and distributors.

Stigelman also works with the media, letting them know what seafoods are in season and which are good buys. This fall, she'll start a cable television show in Morehead City.

As Stigelman knows, selling folks on North Carolina's seafood can sometimes only take a bite. But marketing often becomes more complex, says Joe McClees, seafood development coordinator of the Division of Marine Fisheries. It involves helping people who make their living in the seafood industry. McClees and his staff, including Stigelman, help people build seafood businesses, finance or refinance boats or fishing operations, find distributors for surplus catches or do almost anything associated with the industry. In the long run, says McClees, their efforts build credibility and enhance the state's seafood market.

Until consumers eat more of our clams, crab and croaker, North Carolina's seafood marketing specialists won't be content to watch the industry simmer.

—Sarah Friday

Photo by Scott Taylor



Gary Van Housen

Fresh fish:

To some people, buying fresh fish is like buying a car. If it looks good on the outside, they'll take it. But with fish, it's just as important to check under the gills as it is to check under the hood before making a choice.

High quality and freshness is essential in the fishing industry and depends on everyone from the fisherman to the retailer. Extra care in handling means a better product for consumers, says Gary Van Housen, UNC Sea Grant's seafood marketing specialist. And when consumers are satisfied, they'll come back for more.

It's difficult to generalize how quality can be maintained in fish because of the variety of species, says Van Housen. Before joining Sea Grant, Van Housen served as a seafood inspection agent for the National Marine Fisheries Service in New York. He tested domestic and export products for quality, condition, weights and counts and worked with wholesalers in the U.S. Grade A program for seafood. In addition, he served as a consultant to fish processing plants, giving tips on overall plant sanitation and making sure machinery, processing techniques and procedures were up to government standards.

Now Van Housen uses his expertise to advise fishermen, processors, retailers and restaurant owners in North Carolina on ways to improve their handling of fresh fish. To ensure high quality trawl-caught finfish such as gray sea trout or flounder, Van Housen suggests the following techniques for fishermen.

Rinse the fish after they are hauled onto the boat, and before storage, cull the catch according to size. Then the fish should be iced down and placed in an insulated hold. Alternate layers of ice and fish should be stacked to a height no greater than three feet. This prevents weight loss and crushing of the fish on the bottom of the pile.

Fish should be stored at a temperature no greater than 33 F. Higher temperatures hasten deterioration, Van Housen says. If the proper temperature is maintained, fish can remain in top quality even after eight to 10 days on the boat. Poorly handled fish, however, may be in good condition for only three or four days.

Photo by Scott Taylor



Proper handling ensures high quality fish

Ice is a costly expense for fishermen, but Van Housen recommends its generous use. The amount of ice varies according to the time of year, what kind of catch is expected and how much insulation is provided. Flaked ice is better for the fish, says Van Housen, because it doesn't puncture them or scrape their skin as much as crushed ice. Crushed ice lasts longer, however.

Proper handling techniques at the processing plant also ensure a good quality product, says Van Housen. Because fish is highly perishable, remove fish from the

boat as quickly as possible. Rinse them in a wash tank or with a spray wash. Then sort fish by species and size and place them in waxed boxes filled with ice.

In general, most fish from North Carolina waters are shipped "in the round," or whole, to a wholesaler who may process or rebox the product. However, some dealers in the state do head and gut or fillet the fish before shipment.

Fresh finfish that go directly to a fish market or supermarket should be high in quality. It is important for consumers to take care in selecting fish, as, in general, it is not inspected like other meats. Congress is considering implementing a nationwide seafood inspection program, says Van Housen, but so far, the costs have been prohibitive.

A few items Van Housen suggests checking are the gills, eyes, skin, meat and odor. The gills should be bright red rather than dull pink. Eyes should be clear and bright, not dull and sunken. The fish's skin should be shiny, and the meat, firm and elastic. And its odor should be fresh and mild, similar to fresh seaweed.

The quality of frozen fish depends on how it was handled before freezing and the way it was frozen. A layer of ice glaze can protect fish from oxidation and dehydration. Buyers should check the deglazed weight of seafood because some processors attempt to sell ice glaze as a product's net weight.

Fresh or frozen, North Carolina seafood products are a good buy, says Van Housen. If it's handled properly, no one will take home a lemon.

—Sarah Friday

THE BACK PAGE

"The Back Page" is an update on Sea Grant activities — on research, marine education and advisory services. It's also a good place to find out about meetings, workshops and new publications. For more information on any of the projects described, contact the Sea Grant offices in Raleigh (919/737-2454). For copies of publications, write UNC Sea Grant, NCSU, Box 8605, Raleigh, N.C. 27695-8605.



Technically they're trawling efficiency devices. To fishermen, they're TEDs or Mr. Ts. But whatever you call them, the TED is a new piece of gear that has North Carolina shrimpers talking.

The TED was developed by the National Marine Fisheries Service for use by the commercial shrimping industry in the Southeast. It increases trawling efficiency by decreasing bycatch and improving water flow through the trawl.

The TED is a 36- by 42- by 30-inch frame built of galvanized pipe or fiberglass rod. Inside the frame are slanted deflector bars that force large objects—sea turtles, cannonball jellyfish and horseshoe crabs—out a trap door. A smaller deflector grid rids the net of finfish.

UNC Sea Grant marine advisory agent Jim Bahen is spreading the word about the devices. Using devices supplied by the NMFS, he is asking shrimpers to give the TED a try.

Norman Bellamy of Holden Beach allowed Bahen to install the devices in the nets of two of his shrimp boats. William Varnam, captain of one of the boats, has made three trips with the TEDs and likes them.

"It catches less trash fish so I can drag as long as I want," Varnum says. "Without it I could only tow about two hours before I had to empty the nets. It cuts down on culling time and hired hands. I went from four hired hands to two. I'm glad they came up

with something like this. I wish I had had it a month ago."

In a trial run, Bahen tested the TED on a double trawl shrimp boat. The TED was installed in the tailbag of one net; the other net was left as usual. The TED net eliminated 50 to 75 percent of the bycatch, while catching the same amount of shrimp.

By reducing the bycatch and subsequent culling time, Bahen says fishermen can get their catch on ice faster, making for a fresher product.

Bahen and Varnum agree that the TED eliminates another problem that has plagued the shrimp fishery this summer—dead fish on the beach. After several hours on deck, fish that are culled from the catch and pushed overboard are often dead. They wash ashore, creating an unpleasant sight and smell. But the TED virtually eliminates this problem by decreasing the finfish bycatch.

The TED also pays off in another way. It reduces the bycatch of juvenile fish. That means more fish are likely to grow to maturity—a bonus for finfish fishermen.

Does the TED pose any problems? Very few. Varnum says pieces of wood in the water and some "house" trash have become lodged in the TED. Otherwise, "it's working fine," he says.

Unlike earlier versions of the TED developed by the NMFS, this model is lightweight and more manageable. "It takes no longer to get the nets down or bring them aboard," Varnum says. "And I've had no problems with the TED beating against the side of the boat."

For more information about how to use or build a TED, write Bahen at the N.C. Marine Resources Center at Ft. Fisher, P.O. Box 130, Kure Beach, N.C. 28449, or call 919/458-5498.

UNC Sea Grant has received funds to promote marine-related studies from the Year of the Ocean Foundation, an organization designed to celebrate the ocean and focus on oceanic issues. The grant will be used to provide awards, publications and a

reception for high school students with prize-winning marine science projects, says Lundie Spence, Sea Grant's marine education specialist and co-chairman of the World of Water competition. As part of the World of Water events, the students and their supervising teachers will attend the National Youth Conference on Marine and Aquatic Science Nov. 12 to 15 in San Diego, Calif.



UNC Sea Grant is coordinating a research project for the U.S. Marine Corps at Camp Lejeune. The base's Onslow Beach amphibious training site is one of only two such sites for the Marines in the nation, and there is concern that the training exercises may be creating erosion problems. The Onslow Beach coastal management study will draw together a team of researchers to identify management practices that will ensure continued maintenance of the barrier island for amphibious training.

Sea Grant Director B.J. Copeland has assembled a research team to assess present shoreline processes, historical barrier island trends, and man's influence on those trends. The team includes Sea Grant researchers John Fisher and Margery Overton from NCSU and Sea Grant coastal engineering specialist Spencer Rogers. William Cleary and Paul Hosier, from the University of North Carolina at Wilmington, and Steve Benton, from the N.C. Division of Coastal Management, will also participate in the study.

The N.C. Department of Administration and the N.C. Marine Science Council are sponsoring an ocean policy conference. The N.C. Governor's Conference on Coastal State Ocean Policy will be held Oct. 30 through Nov. 1 at the Sheraton-Crabtree in Raleigh. Michael Orbach, East Carolina University anthropologist and a Sea Grant

Continued on next page

researcher, is chairman of the conference. Governor James Martin will present the opening remarks.

Orbach says the goal of the conference is to educate policymakers and the general public about important ocean policy issues facing the state and to develop a coordinated coastal state perspective on those issues.

The registration fee for the conference is \$45. For more information, call the N.C. Office of Marine Affairs at 919/733-2290 or the ECU Institute for Coastal and Marine Resources at 919/757-6779.

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Coastwatch is a free newsletter. If you'd like to be added to the mailing list, fill out this form and send it to Sea Grant, Box 8605, NCSU, Raleigh, N.C. 27695-8605.

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