

Fish farming addresses protein need

U.S. industry falls far short of meeting domestic demand

Cookson Beecher

Capital Press Staff Writer

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Salmon farmer Tom May, left, co-owner of American Gold Seafoods in Washington state, and scuba diver Bill French discuss the salmon net pens French is monitoring off the shoreline of Port Orchard.

BAINBRIDGE ISLAND, Wash. - A lot of farmers would envy salmon farmer Tom May, co-owner of American Gold Seafoods.

As he stands on a dock off the shoreline of Bainbridge Island looking over a series of net pens, he watches 10-to-15-pound Atlantic salmon leap into the air, their sleek bodies glistening in the sun. The splash they make as they return to the water represents the splash that aquaculture is making and is expected to make in the years to come.

According to the United Nations' Food and Agriculture Organization, aquaculture, which includes farmed fish and shellfish, has grown faster than any other agriculture segment in the past half-century - from less than 1 million tons to about 45.5 million tons (excluding aquatic plants) in 2004.

May says he's proud that his company, which works equally with wild-caught and farm-raised salmon, has a healthy product to offer, especially in light of consumers' growing interest in health and nutrition.

According to the USDA, both farmed Atlantic salmon and wild Chinook salmon are excellent sources of omega-3 fatty acids, with nearly identical amounts of these beneficial nutrients in a 3-ounce portion.

A Harvard study said that eating two of servings of fish each week - or by consuming enough fish oil - people can cut their risk of dying from a heart attack by more than a third.

In another "healthy" push for fish, the 2005 U.S. Dietary Guidelines recommended at least two servings of fish per week.

But for those in aquaculture here in the United States, that's just part of the picture. The need to capture a larger share of the domestic market represents another part.

Currently, more than 70 percent of the seafood that Americans consume is imported, and at least 40 percent of those imports come from farms that produce fish and shellfish.

For May and his fellow salmon farmers, that holds out the promise of an expanded domestic market as more and more consumers become interested in buying locally grown food.

Salmon farmed in this country have "USA" labels on grocery packages.

Bright future

Globally, the future looks exceedingly bright for aquaculture, which includes farmed fish and shellfish.

According to forecasts from United Nations Food and Agriculture Organization, FAO, the total demand for seafood will surge by 50 million tons in the coming decade and will reach 133 million tons by 2015.

That expected growth in demand also puts the ball in aquaculture's court.

The total world supply of wild-caught fish has been stable at about 88 million tons since 1985. FAO experts predict that's the global sustainable limit of harvest.

In other words, if world demand for seafood does reach 133 million tons in 2015, and wild-caught fisheries can only yield 88 million tons, that gap is going to need to be filled.

Evidence points to aquaculture as the key. Aquaculture already supplies 43 percent of the fish humans eat - up from 27.5 percent in 2000 - and that percentage is expected to grow.

In the marketplace, farmed salmon - sometimes referred to as the "jug wine of salmon" because of its lower cost compared with wild caught salmon - represents an affordable option for consumers.

Nutritionists see that affordability as a plus when it comes to increasing fish consumption.

Open ocean next?

Currently, only Washington state and Maine have salmon-farming operations in the United States.

When looking to the future, U.S. fisheries experts and fish farmers alike agree that siting more net pens off shorelines is probably not in the picture in this country.

Some say the answer is to allow aquaculture to be sited offshore.

In June 2005, President Bush sent the National Offshore Aquaculture bill to Congress. The legislation would grant NOAA Fisheries the authority to permit marine aquaculture facilities in the open ocean - from three to 200 miles off the U.S. coasts.

According to the Bush administration, offshore siting would allow for the expansion of "an underutilized industry."

"While other countries have continued to develop aquaculture, the United States has fallen behind," reads a Bush administration press release. "This, in turn, has resulted in a swelling seafood trade deficit as Americans increasingly rely on the supply of imported farmed seafood products to meet the domestic market demand."

Conrad Mahnken, retired NOAA scientist and current member of the Washington Fish and Wildlife Commission, said it comes down to whether the United States wants to have a domestic aquaculture industry.

"Do we want a secure supply (of fish) or do we want to rely on other nations for aquaculture?" he said. "Some people say it would be healthier to have aquaculture here in this country."

Stacey Viera, spokeswoman for the National Fisheries Institute, agreed. "Traceability is important," she said, referring to food-safety issues. "And aquaculture provides economic benefits to rural communities. It also helps relieve the pressure on wild fish stocks."

Cookson Beecher is based in Sedro-Woolley, Wash. Her e-mail address is cooksonb@sos.net.

Atlantic salmon

According to a January 2007 report, "Sustainable Marine Aquaculture," the farming of Atlantic salmon grew rapidly in the United States in the 1990s and peaked in production (49 million pounds) and value (\$99 million) in 2000.

Atlantic salmon are the fish-farmed in net pens in Washington state and Maine. No other states have salmon farms.

Since 2000, production of farmed Atlantic salmon has declined. However, after dipping to very low levels in 2002, production rebounded in 2003 to 36 million pounds of salmon with a value of more than \$54 million.

Data recently released by the USDA show 2005 sales of 20.7 million pounds of farmed salmon valued at \$37.4 million.

U.S. consumption trends

The National Fisheries Institute (NFI) has released its "Top 10" list of the most consumed fish and seafood in the United States for 2005.

Seafood consumption in America was 16.2 pounds per capita in 2005, according to the most recent data from NOAA Fisheries, down slightly from 16.6 pounds in 2004. Compared with five years ago, overall consumption has risen 9.5 percent from 14.8 pounds in 2001.

Shrimp continued to lead seafood consumption, down just 0.1 pounds per person to 4.1 pounds for the year. Canned tuna remained in second place on the list, at 3.1 pounds per capita.

Still in the No. 3 slot, salmon consumption rose by 13 percent in 2005.

Farm-raised tilapia continued to grow, up 21 percent over 2004. From 2003-2004 the mild white fish jumped from ninth place to sixth place, where it remains for 2005.

Overall, seafood consumption totaled 4.78 billion pounds (edible weight) for the year.

The Top 10 list was compiled for the National Fisheries Institute by H.M. Johnson & Associates, publishers of the Annual Report on the United States Seafood Industry. Data for this list came from NOAA Fisheries.