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*Outlook*

# Aquaculture Outlook

David J. Harvey

## Domestic Aquacultural Production Higher and Imports Up

With a stronger domestic economy and higher prices for livestock and poultry products, domestic aquacultural production is expected to increase in 2004. Higher catfish production is expected to be the chief cause of the increase. Imports of foreign aquacultural products are also expected to expand, but at a slower rate than seen over the last several years. With a slightly weaker dollar, imports of some seafood products will be more expensive and may slow the almost continuous decline in prices seen over the last couple of years. Many foreign aquacultural producers will continue to target the U.S. seafood market as a growth market for their products.

Higher grain prices will pressure production costs for aquacultural producers that utilize grains in their feed formulations. Feed production for farm-raised seafood species takes in a wide variety of products. A number of mollusk species, such as mussels, clams, and oysters, rely on the naturally occurring foods in the bodies of water where they are grown. Some other species need live food in their diet for at least part of their lives. However, for many of the largest aquaculture species like catfish, tilapia, and shrimp a large portion of their diet comes from grain products.

While a number of different grain products are used in aquacultural feeds, the primary ones are corn and soybean meal. In 2003 the average prices for these products rose considerably, especially in the second half of the year. The forecast for corn and soybean meal in 2004 is for higher prices through the first three quarters, but then falling somewhat in the fourth quarter. These higher prices will raise production costs for many aquacultural producers, but this will also mean higher production costs for competing livestock producers.

The outlook for domestic aquacultural production and trade in aquaculture products in 2004 is based on a number of factors. First, U.S. economic growth in 2004 is expected to be relatively strong, boosting restaurant sales. Second, domestic grain prices are expected to increase in 2004, adding to feed costs. Third, the dollar is expected to be

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relatively soft against a number of currencies, making U.S. exports less expensive and imports less competitive.

U.S. production of pork is expected to be up 1 percent in 2004, and beef production is expected to decline 4 percent. At the retail level, pork prices are expected to be about even with the previous year and beef prices slightly lower. Broiler production is expected to increase by 3 to 4 percent after being relatively flat in 2003. Broiler prices strengthened in the second half of 2003 and have moved even higher through the first 2 months of 2004. Higher broiler prices are expected to provide some additional demand for seafood products.

***Catfish Production, Sales, and Prices Higher in 2004***

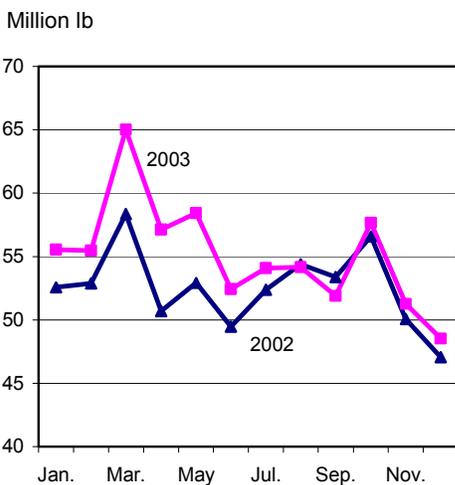
Catfish sales by farmers to processors are expected to increase in 2004, reaching between 675 million and 685 million pounds, up 2 to 3 percent from 2003. Based on grower estimates of inventories at the beginning of January 2004, grower sales are expected to show slight increases during first-half 2004 compared with a year earlier, with stronger growth in the second half of the year. Although the quantity of grower sales is expected to increase only a small amount, grower prices in the first quarter are expected to be considerably higher than the depressed prices of first-quarter 2003.

Grower sales of catfish in 2003 were up 5 percent, and prices were slightly higher (up 2 percent). Prices started 2003 below the previous year, but strengthened as the year progressed, especially in the fourth quarter. Grower sales totaled 661.5 million pounds in 2003, up about 31 million pounds from 2002. These sales lagged somewhat behind, increasing by less than 1 percent to 319.3 million pounds. Sales by processors were strongest during the first third of 2003. After that, sales by processors were about even with sales in the same period the previous year. Processor-held inventories of finished products at the end of January 2004 were 12.7 million pounds, about 1 million pounds higher than the previous year.

Although there were gains in both grower and processor sales, gains in sales at the processor level were somewhat offset by a decline in average price. Farm prices began 2003 below those of 2002 for the same period. However, farm prices gained strength through most of the year, finishing 2003 at 62.9 cents per pound, up 16 percent from a year earlier. This price strength has carried over to January 2004, when farm prices were 66.8 cents per pound, almost 14 cents a pound higher than a year earlier and the highest they had been since June 2001. The average farm price for 2003 was 58.1 cents a pound, up 2 percent from a year earlier. Processor prices were depressed throughout most of 2003, but also began to strengthen in the fourth quarter. The weighted average price for all processed catfish products in 2003 was \$2.05 a pound, down 2 cents from 2002 and 20 cents lower than 2001.

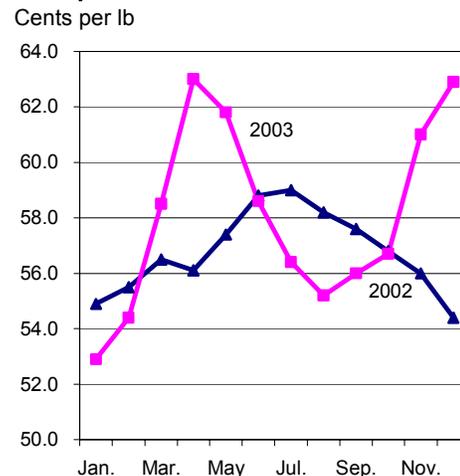
Grower sales in the first half of 2004 are expected to be influenced by grower inventory levels, the overall domestic economic performance, and prices for competing red meat and poultry products. Supplies of red meat and poultry are expected to be mixed in 2004, with beef supplies lower, pork supplies about even with the previous year, and poultry supplies higher. Prices for beef and pork are not expected to change significantly from a year earlier, but poultry prices at the beginning of 2004

Figure 1  
**Catfish farm sales**



Source: NASS, USDA.

Figure 2  
**Farm prices for catfish**



Source: NASS, USDA.

are much higher than a year earlier. The higher broiler prices are expected to help catfish prices move upward. Farm prices for catfish are expected to remain above their year-earlier level through most of 2004. If meat and poultry prices start to weaken towards the end of the year, catfish prices are likely to move closer to their year-earlier levels. Average grower prices for 2004 are expected to be up from their 2002 and 2003 levels and may approach the 64.5-cent-per-pound average of 2001.

Between 2000 and 2002, prices for both corn and soybeans remained relatively stable at fairly low levels. However, prices in 2003 showed an 18-percent increase in the price of soybean meal, and corn prices rose by 7 percent. Prices for soybean meal and corn are expected to increase again in 2004, and higher feed costs are likely to pressure grower margins.

### ***Catfish Production Expected Higher in 2004***

Grower inventories at the beginning of 2004 showed a lower number of fish in most of the different size categories. The National Agricultural Statistics Service (NASS) Catfish Production report contains grower inventory estimates as of January 1 and is the only report that includes data from States other than the four largest producing States (Mississippi, Alabama, Arkansas, and Louisiana). Catfish growers indicated that at the start of 2004 the numbers of broodfish, fingerlings, large stockers, and small, medium, and large food-size fish had all decreased relative to the previous year. The only category where grower inventories had increased was for small stockers, where the estimate for grower holdings rose by 25 percent to 568 million fish.

This year marks the second year in a row that the estimated grower inventory of all food-size fish has declined. At the start of 2004, the total number of food-size fish held by growers was estimated at 357 million, down 9 percent from the previous year. The reported grower holdings of small food-size fish were 241.5 million fish and are 5 percent less than at the start of 2003. The number of medium food-size fish at the start of 2004 was estimated at 105 million fish, down 18 percent from the previous year. Holdings of large food-size fish was also lower, but the large food-size

category accounts for a small percentage of food-size fish in inventory. The strong decreases in inventory numbers of all food-size fish was due to cutbacks in each of the four major producing States. While the number of small food-size fish has fallen for two consecutive years, the number of medium food-size and large food-size fish held by growers both declined at the beginning of 2004 after increasing in 2003. The holdings of the small food-size fish and medium food-size fish will make up the bulk of the fish sold by growers during the first 3 to 4 months of 2004. This means that catfish processors will likely have a smaller number of fish available for processing during the first half of the year, putting upward pressure on prices. For small food-size fish, most of the decrease in grower inventory is from a drop of 9 million fish held by growers in Mississippi. The estimated inventory of small food-size fish in Mississippi at the beginning of 2004 was 131 million. This is 6-percent lower than at the start of 2003 and 27 percent lower than at the beginning of 2002. The reduction in inventory of small food-size fish held by growers is expected to result in continued price strength, on a year-over-year basis at the end of the second quarter and into the third quarter.

The inventory of all food-size fish held by growers at the beginning of each year represents the bulk of readily available catfish for processing during the first 3 to 4 months of the year. With a decrease in the overall inventory of food-size fish, higher expected prices for poultry, and expected higher prices for imported seafood products, farm prices for catfish are expected to slowly move higher, although there is likely to be some dropoff in prices after the Easter period ends.

While the inventory holdings for most catfish showed strong declines in 2004, the January 1, 2004, inventory estimate for stockers showed a 10-percent increase following a 15-percent increase the previous year. However, this is only slightly higher than the stocker inventory estimate at the beginning of 2001. The number of fingerlings in inventory at the start of 2004 was 727 million, 27 percent lower than the previous year. Stockers and fingerlings in inventory at the beginning of the year will provide the bulk of the fish that will be sold to processors in the second half of the year. With an increase in stocker inventory but a large decrease in fingerling inventory, the supply of catfish of

market size for processing is not expected to tighten until the very end of 2004, when the fingerling class at the beginning of the year reaches market size. With farm prices in January 2004 almost 14 cents a pound higher than a year earlier, growers will likely push as many fish to market as soon as possible. This may put a lid on price increases in the short term, but later in the year prices are again expected to rise as a smaller number of fish are available for processing.

### ***Farm Prices Higher in 2004***

After averaging 75 cents per pound in 2000, farm prices for catfish went on an almost continual downward slide before bottoming out at 52.9 cents per pound in January 2003. Reduced inventory holdings by farmers, lower stocks of fish held by processors, and a reduction in imported catfish all combined to place some upward pressure on prices in 2003. Over the first half of 2003, farm prices averaged 58.2 cents per pound, 3 percent higher than the previous year. Prices in the third quarter of 2003 were about even with the previous year, but rose in the fourth quarter as supplies tightened and prices for competing livestock products started to strengthen. The expectation for 2004 is for continued strong prices during the first several months as lower supplies of medium and large food-size fish are utilized. Prices after this period are expected to decline slightly as the lower supplies of small food-size fish are offset by larger supplies of fish in the stocker class. Processor prices throughout the year will be boosted by the impact of a stronger domestic economy on sales in the foodservice sector.

During 2003, farm sales to processors totaled 661.5 million pounds, an increase of 5 percent from 2002. With this level of sales and an average price of 58.1 cents per pound, the implied gross sales by catfish farmers was \$384 million, up almost \$25 million (7 percent) from the previous year and almost identical to gross sales in 2001. This reverses two consecutive years of significant declines in gross sales of catfish at the farm level. Including sales of other products (broodfish, stockers, and fingerlings) and sales to outlets besides processors, catfish growers reported total sales of \$424.9 million in 2003, up 3 percent from 2002's revised \$411.4 million. The combination of a small increase in volume and a small increase in

prices are expected to push the gross sales of catfish to processing plants in 2004 to between \$425 million and \$432 million, still well below the \$445 million of 2000.

### ***Pond Acreage Down***

The NASS Catfish Production report indicated that during the first half of 2004 growers would have approximately 177,800 acres of ponds in catfish production. This is down slightly less than 10,000 acres from the previous year and is the second consecutive year with major reductions in acreage. Estimated pond acreage for the first half of 2004 is lower for foodfish, fingerlings, and broodfish, but lower acreage for foodfish accounts for most of the reduction. Almost all of the decrease in foodfish pond acreage came in Louisiana and Mississippi, as acreage increased slightly in Alabama and Arkansas. In addition, growers indicated that the amount of acreage they expected to devote to rebuilding existing ponds and building new ones had fallen from the previous year. This slower pace of new construction and renovation has been going on over the last several years and is expected to continue as long as prices remain depressed and growers remain under pressure from higher production costs.

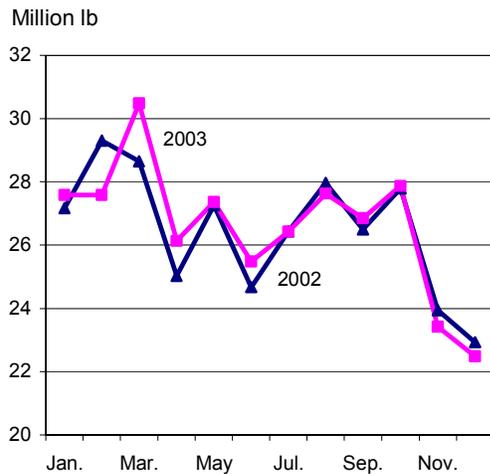
### ***Processor Revenues Down 1 Percent***

With a 1-percent increase in sales volume and a 1-percent drop in the average price, gross processor revenues from catfish sales in 2003 remained about even with their 2002 level at \$655.2 million. During 2003, catfish processors sold 319.3 million pounds of product, up about 1 percent from the previous year. For 2003, the weighted-average price for processed catfish products was \$2.05 per pound, down 2 cents per pound or 1 percent from 2002. While basically unchanged from a year earlier, the weighted-average price of catfish products in 2003 was much lower than in 2001 when prices averaged \$2.25 per pound. Average processor prices have fallen in 3 of the last 4 years after reaching \$2.38 per pound in 2000.

The decrease in the average price for catfish products was due chiefly to lower prices for frozen products. The weighted-average price for fresh products rose to \$1.99 per pound, 1 percent higher

Figure 3

**Catfish processor sales**



Source: NASS, USDA.

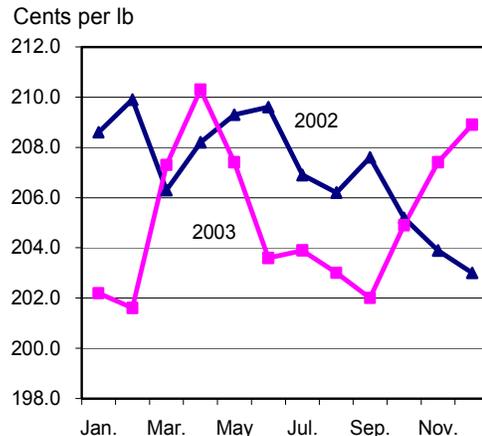
than the previous year. The weighted-average price for frozen products fell to \$2.10 per pound, down 2 percent from 2002. With the expectation of slightly higher sales levels and some increase in processor prices, processor revenues are forecast to reach between \$680 million and \$690 million in 2004.

Processor sales levels were generally higher on a year-over-year basis for most of the first half of 2003. Overall sales of fresh fish products totaled 128.6 million pounds in 2003, up 2.8 percent. Sales of fresh catfish products have risen in each of the last 3 years. Overall sales of frozen catfish were down 1 percent in 2003 after rising by 11 percent the previous year. Sales of frozen catfish fillets are the most important product for the catfish processing industry. Sales of frozen fillets declined 5 percent in 2003, and sales of these products have declined in 3 of the last 4 years. In the past 2 years processors have claimed that sales of frozen fillets had been hurt by imports of low-cost catfish fillets from Vietnam. The majority of the decrease in frozen product sales was due to a 5-percent decrease in fillet sales. Sales of whole frozen fish fell about 1 percent and sales of other frozen catfish products rose by 10 percent to 53 million pounds. In 2003, imports of catfish totaled 5.4 million pounds, considerably lower than the 10.2 million pounds imported in 2002

Figure 4

**Catfish processors' price**

(weighted average)



Source: NASS, USDA.

While the overall sales volume of catfish products rose in 2003, the average price for almost all catfish products was still very depressed. The weighted-average price for fresh catfish products actually rose 1 percent to \$1.99 per pound. However, prices for fresh fillets dropped about 1 percent in 2003 and have fallen for the last 3 years. In fact, the average price for fresh catfish fillets was lower in 2003 than it was in 1986. Prices for fresh whole fish were \$1.35 per pound, up 2.5 percent, but that was because they had fallen so heavily in 2001 and 2002. Prices were not much better for frozen catfish products. Frozen whole fish averaged \$1.84 per pound and have declined in 3 of the last 4 years. Prices for frozen filleted catfish averaged \$2.41 per pound, up 1 percent, but this is still the second lowest price in the last 18 years. Prices for frozen other catfish products declined by 7 percent in 2003 to \$1.44 per pound and have declined in each of the last 7 years.

The overall outlook for catfish in 2004 is mixed. On the positive side imports of catfish products have fallen considerably over the last 2 years and are expected to remain at a low level in 2004. In addition prices of competing livestock and poultry products are expected to be considerably higher than the previous year, especially through the first half of the year. Also, domestic economic growth is forecast to be relatively strong, boosting sales at restaurants. On the negative side, prices for corn and soybean meal are expected to be considerably

higher in 2004, pushing up feed costs to catfish growers. Also, the continued growth in imports of competing aquacultural products will place downward pressure on catfish prices.

### ***Trout Production Down in 2003***

The NASS Trout Production report had sales of domestic trout products in 2003 estimated at \$66.4 million, down 5 percent from the previous year. This is the fourth consecutive year that overall trout sales have fallen. This survey covered 331 commercial farms that sold trout products. In addition to the commercial trout farms surveyed, 242 operations that distributed trout in 2003 were also included in the survey. These other operations distributing trout are doing so for restoration, conservation, or recreational fishing, and many are State or Federal hatcheries. The estimated value of the fish distributed from these operations was \$61.2 million in 2003 and is separate from the figures given for the value of trout sold from commercial operations.

Most of the decrease in overall trout sales in 2003 came from lower sales of food-size fish. In terms of the trout farmers' survey, food-size fish are those 12 inches or more in length. Sales of food-size fish totaled \$55.4 million, down about \$3 million from a year earlier. The decline in the overall value of food-size fish sold in 2003 was the result of a drop in the poundage of trout sold. The value of food-size trout in 2003 was \$1.09 per pound, up a penny from the previous year. Trout prices have continued to be impacted by prices for a number of competing fish products such as salmon, catfish, and tilapia. In 2003, trout farmers in a number of Western States were again hurt by reduced water flows due to drought. In 2003, 68 percent of food-size fish sold by commercial trout producers went to processors, with another 20 percent going for recreational purposes. Most of the decline in food-size trout production was in Idaho and North Carolina. Trout production is a

very concentrated industry with the top five producing States accounting for 93 percent of total U.S. production. Idaho is the dominant producer, accounting for 68 percent of food-size fish production.

Sales of stockers (fish 6 to 12 inches) totaled 2.3 million pounds with a value of \$5.7 million in 2003. This is a slight increase in both the total weight of fish sold and the total value of sales. The average price per pound of stockers was \$2.49 in 2003, down 4 cents from the previous year. Stockers are sold to both other trout farmers (for further growout) or private groups, or State governments for recreational purposes. Many of the trout distributed by State and Federal hatcheries are stocker fish being placed in public waters.

Sales of trout fingerlings, fish less than 6 inches, are normally in units of a thousand fish. In 2003 the total number of fingerlings fell to 7.3 million fish, down 20 percent from 2002. Although the number of fish declined, the total live weight of fingerlings sold increased as the average weight of a thousand fish increased by 30 percent. Overall sales of fingerlings by commercial trout producers totaled \$1.2 million, down 16 percent from the previous year. Sales of trout eggs fell to \$4.2 million in 2003, down 6 percent. This is the second consecutive year that sales of trout eggs have fallen heavily, with the value of sales declining 18 percent since 2001. With the decline in the number of trout eggs sold, the price increased. The average price per thousand eggs was \$15.80, up 6 percent from 2002.

Generally lower prices for a number of farmed fish products have placed downward pressure on trout prices over the past several years. In 2004, trout producers are expected to benefit from stronger prices for catfish products and higher prices for salmon and tilapia due to a weaker exchange rate.

### *Tilapia Imports Continue Higher*

Tilapia import quantities rose sharply in 2003, reaching 199 million pounds, considerably higher than earlier expectations. The total value of tilapia imports also was up sharply, increasing by 38 percent to \$241.2 million. The volume of imported tilapia increased in all product categories, however, much of the increase can be attributed to a 90-percent increase in imports of frozen fillets. Frozen whole fish rose by 20 percent and accounted for 54 percent of all tilapia imports. Imports of fresh fillets totaled 40 million pounds, 13 percent higher than in the previous year. The amount of foreign tilapia production required to supply the U.S. market was 391 million pounds of live fish.

Since 1993, the first full year that tilapia imports were reported separately, the value of tilapia imports has grown from \$18 million to \$241.2 million in 2003, an increase of 1,240 percent. The increase in value over this time span has been almost exclusively due to a higher volume of imports. Even though frozen whole tilapia accounted for 54 percent of imports on a quantity basis in 2003, imports of fresh and frozen fillets have been rising the fastest and now account for 77 percent of imports on a value basis.

One of the major changes happening in tilapia imports is the declining quantity coming from Taiwan. Over the last 2 years shipments from Taiwan have declined by over 15 million pounds while the overall level of tilapia imports was rising by almost 75 million pounds. Almost all of the decrease in Taiwanese tilapia shipments has come from declines in shipments of frozen whole fish. Until 2000, imports of frozen whole tilapia had been dominated by shipments from Taiwan. However, in 2003, shipments of whole tilapia from China rose by 20 million pounds, and China is now the dominant supplier in that market. Even though the quantity of imported frozen whole fish has risen by 27 percent over the last 2 years, this is not the fastest growing segment of the tilapia market. Even with the increase in import quantities, prices for imported frozen whole tilapia have continued to rise. In 2003, prices averaged 51 cents a pound, only slightly higher than in 2002, but a 6-cent increase from 2001.

The fresh fillet segment of the tilapia market continued to expand rapidly in 2003. The volume of imports was up 26 percent to 39.6 million pounds. The value of this segment has also been expanding rapidly. Shipments in 2003 were valued at \$102 million, up 25 percent from the previous year. While average prices for fresh fillets have gradually been decreasing, prices have stayed relatively strong considering the large expansion in the quantity of product being imported. The fresh tilapia segment of the market is dominated by imports from Ecuador, Costa Rica, and Honduras. These three countries account for 91 percent of all imported product. While imports from Costa Rica have been growing, the most dynamic part of this market has been the growth of imports from Ecuador. Ecuador now accounts for over 50 percent of the imports, having doubled its shipments to the United States over the last 2 years. Producers in Ecuador have switched to tilapia as an alternative to growing shrimp. With falling prices in the shrimp market, additional acreage in Ecuador is likely to switch to tilapia, further boosting production.

While the fresh fillet segment of the imported tilapia market has grown significantly, the frozen fillet segment of that market has expanded even faster. In 2003, imports of frozen tilapia fillets totaled 51.3 million pounds, 90 percent higher than the previous year. These imports were valued at \$84 million, 74 percent higher than in 2002. This means that like the fresh fillet segment, prices for frozen fillets has been gradually declining, although at a time when shipments are rising very rapidly. The frozen fillet segment is dominated by shipments from Asia. Over the last 2 years, imports from Thailand and Indonesia have increased 349 and 64 percent, respectively. However, the large movement in this segment has come from a huge jump in imports from China. Over the last 2 years shipments from China have risen just under 30 million pounds (527 percent). Chinese shipments in 2003 accounted for 68 percent of all frozen tilapia fillet imports. Chinese fillets at \$1.47 per pound are also considerably lower in price than those from a number of other countries. This is a 10-cent-per-pound decrease from the previous year, but only a 7-cent-a-pound decrease from 2001, while shipments increased by almost 30 million pounds. In 2004, shipments

from Thailand and Indonesia are expected to rise, as acreage is shifted from shrimp to tilapia production. However, product from these countries will be under strong price pressure from Chinese production.

With the U.S. economy expected to be somewhat stronger in 2004, tilapia imports are again expected to post a strong increase, but less than seen in 2003. Total tilapia imports are expected to reach between 225 million and 235 million pounds on a product-weight basis (445 million to 460 million pounds on a live-weight basis). The value of imports is expected to reach between \$265 and \$275 million. The average import price is expected to decrease slightly in 2004, even as imports of fresh and frozen fillets become larger shares of total imports. Prices for the individual types of tilapia imports are expected to show small decreases due to strong competition among producers and from other seafood products. In most categories, expanding production in Ecuador and China is expected to put downward pressure on prices as these countries try to expand their shares of the U.S. market.

### ***Atlantic Salmon Imports Up Marginally in 2003***

U.S. Atlantic salmon imports in 2003 totaled 414 million pounds with a value of \$916 million. These are increases of 0.3 percent in quantity and 12 percent in value over a year earlier. The lower increase in the quantity of imports resulted in a 23-cents-a-pound increase in the average price to \$2.21 a pound. During the previous 2 years, the average price for Atlantic salmon imports had fallen 58 cents or 23 percent. The price increase showed up in all three segments of the salmon import market. The falling prices for salmon products had lowered any incentive that farmers had to expand production, and salmon prices were helped by the strength of the livestock market in the second half of 2003. With a slightly weaker dollar expected in 2004, salmon imports are expected to increase only modestly in quantity, but prices may increase as livestock prices are expected to be stronger than a year earlier.

One of the factors spurring consumption of salmon has been its image as a healthful food, especially its relatively high concentration of omega 3 fatty acids that have been characterized as beneficial to a

healthy heart. However, the authors of a study on salmon in the January 9, 2004 issue of the journal *Science* assert that “farmed salmon have significantly higher contaminant burdens than wild salmon”. The authors specifically concentrated their analysis on the presence of such contaminants as PCB’s, toxaphene, and dieldrin. Based on their risk assessment analysis, farmed salmon from Canada and Chile, the major suppliers to the U.S. market, should not be consumed in more than one meal per month. Between 2000 and 2003, imports of farmed salmon have increased by 125 million pounds and are now over 400 million pounds per year.

Domestic production accounts for only a small percentage of the total salmon supply in the United States. The majority of the wild harvest salmon supply comes from the West Coast of the United States or Canada and from imports of foreign farm-raised salmon. The only two States with any significant production of farmed salmon are Maine and Washington. In 2003, production in these two States was estimated at less than 40 million pounds on a live-weight basis. Maine’s production has dropped significantly in the last 2 years as new production restrictions have gone into place that limit harvesting at production sites to only every other year.

In 2003, imports of fresh whole Atlantic salmon products decreased by 11 percent to 132.8 million pounds, and imports of frozen whole products rose by 32 percent to 8.8 million pounds. With these changes, imports of fresh whole salmon and frozen whole salmon in 2003 were just about even with those of 2001. The large decline in imports of fresh whole fish was chiefly offset by larger imports of fresh or frozen fillets. Between 2001 and 2003, imports of filleted products have increased by almost 55 million pounds. This rapid growth has propelled imports of filleted products into by far the largest of the three-product categories. In 2003, the quantity of imported filleted products accounted for about two-thirds of all imported Atlantic salmon products. The strong increase in the quantity of higher priced fillets imported resulted in an increase in the average price. The average price for filleted products in 2003 rose to \$2.28 per pound, more than making up for the decline in prices that occurred in 2002. The average price for filleted product was helped in

the second half of 2003 by the rising prices for competing meats. Even with the increase in the average price of filleted products, importers will still have an incentive to increase their use of filleted products.

There continues to be a considerable difference in the average price of filleted products coming from Canada and Chile. While prices for each country's fillets increased in 2003, there still is almost a \$1 per pound difference. Part of the difference can be attributed to the fact that Canada exports a higher percentage of fresh fillets than Chile. However, there is also a large difference in the average price of fresh whole fish. Although both products are listed under the same 10-digit trade code, there must be differences in the characteristics of the products coming from the different countries. Canada is the largest supplier of fresh whole fish, and its exports to the United States had an average price of \$2.32 in 2003, more than double that of Chile. The United Kingdom is the second largest supplier of fresh whole salmon to the U.S. market and it too has a very low price of \$1.65 per pound.

Chilean producers continued to expand their dominance of filleted product shipments to the U.S. market, accounting for 83 percent of total filleted imports in 2003. Imports of fillets from Canada, after growing in 2002, fell by 20 percent in 2003 and were at the same level they were in 2001. The major factor behind the growth in the fillet market is the prices. The price of filleted products from Canada averaged \$3.22 per pound in 2003, while the average for filleted product from Chile was only \$2.14. The price differential between the two countries gives every incentive for salmon importers to use Chilean product.

Even though economic growth in the United States in 2004 is forecast to be relatively strong, imports of Atlantic salmon are expected to expand only slightly. Shipments in 2004 are expected to be near 425 million pounds and \$950 million in value. Demand for salmon products is expected to be pressured by a number of factors, including the adverse publicity from the study on contaminants in salmon products. Additionally, a weaker dollar will make prices higher.

### ***Shrimp Imports: Value and Volume Higher***

The volume of imported shrimp continues to set records. In 2003, total shrimp imports were 1.1 billion pounds, up 18 percent from the previous year and 26 percent higher than in 2001. The value of imported shrimp reached \$3.8 billion in 2003, just slightly higher than the previous record set in 2000. As it has in the previous 2 years, the average price of shrimp products fell heavily in 2003. After reaching \$4.94 per pound in 2000, the average price of imported shrimp products has declined by \$1.56 per pound, to \$3.38 in 2003.

In 2003, the majority of the increase in shrimp imports came from larger shipments of frozen shrimp, which rose 20 percent. With an increase in shipments of 148 million pounds, frozen shrimp accounted for almost 90 percent of the total increase in shrimp imports. In a number of recent years most of the increase in shrimp imports has come from growth in shipments of prepared shrimp products. In 2003, imports of prepared shrimp products did rise, but only by 18 million pounds or 9 percent. Imports of fresh shrimp declined in 2003, but this was the only category where prices rose. In fact, prices for fresh shrimp have risen in the last 2 years, and with an average price of \$7.06 per pound, have increased by 71 cents per pound in the last 2 years.

Of the eight largest countries exporting shrimp to the United States in 2003, six showed volume increases. After falling heavily in 2000 and 2001 due to disease problems, imports from Ecuador have risen by 17 million pounds (28 percent) over the last 2 years. However, the 75 million pounds that Ecuador exported to the United States in 2003 was still 47 percent lower than the peak amount it shipped in 1998 (142 million pounds). Two countries have been added to the countries listed 4separately on the shrimp import table. Shipments from Brazil have been rising rapidly over the last several years and it is now the third largest exporter to the United States among Western Hemisphere producers. Currently, Brazil's shipments are almost exclusively in the frozen shrimp category. With shipments to the United States at just over 48

million pounds, exports from Brazil have more than doubled in the last 2 years. The other added country is Vietnam. Vietnam has rapidly expanded its farmed shrimp production in the southern part of the country and now is the third largest exporter to the United States on a quantity basis and the second largest on a value basis. In 2004, shipments from Brazil and Vietnam are expected to continue to expand and become a larger share of total imports. Even though shipments from Vietnam have expanded rapidly over the last several years, shipments from China have actually risen even more rapidly. Over the last 2 years, imports from China have risen by 189 percent, reaching 179 million pounds in 2003.

There was again a strong decline in the average price for imported shrimp in 2003, the third consecutive year of declining prices. With the total quantity of imports rising by 18 percent and the total value rising by 9 percent, average prices fell to \$3.38 a pound, down 34 cents per pound from the previous year. While prices for imported shrimp from a number of countries fell in 2003, the largest declines were in prices of shrimp from Thailand and China. In 2000, the average price of frozen shrimp imports from Thailand was \$5.37 a pound, by 2003 that had fallen to \$3.37 a pound, a decrease of 37 percent. The quantity of shrimp imports from China rose by 64 percent in 2003, but the average unit price fell to \$2.47 per pound, down 26 cents per pound from the previous year. Not all shrimp prices declined in 2003. The average price of shrimp imports from Mexico and India were actually higher. The price of Mexican shrimp was 30 cents per pound higher in 2003. India's shipments to the United States averaged \$4.08 per pound, an increase of 35 cents per pound from 2002. One thing that Mexico and India have in common is that a large percentage of their shipments are very large shrimp. In 2003 the average price of shrimp in some of the larger size classes rose. Bangladesh is another country where most of its exports to the United States are in the larger size classes. The average price of shrimp exports from Bangladesh declined only slightly from 2002 to 2003 (about 1 percent).

The average price for imported prepared shrimp also declined sharply in 2003. By 2003, the average price had declined from over \$5 per pound in 2000 to \$3.31 a pound, a 34-percent decline and

down 29 cents per pound from the previous year. Imports from Thailand dominate this category and accounted for 56 percent of the total. Imports of prepared shrimp products from Thailand had been falling over the last several years, but rose again in 2003. The increase was not great, only 3 percent, and the total value of shipments declined. Over the last 2 years much of the growth in the volume of imported prepared shrimp has come from higher shipments from Vietnam and China. Imports from Vietnam have risen by 68 percent and those from China have jumped by over 900 percent. With shrimp production expected to increase in Vietnam and China and low cost labor available, exports of prepared shrimp products from these countries to the United States are expected to continue to expand, although the strong declines in average prices may lessen the incentive for producers in those countries to expand production.

Strongly increasing imports over the last several years have made China the second largest supplier in the frozen and prepared products segments of the shrimp market. Shipments from China in 2003 totaled 179 million pounds, up 63 percent from the previous year and 189 percent higher than in 2001. While the quantity of products has been expanding strongly, the unit value for China's shrimp exports has been falling. In 2003 the average price for all of China's shrimp shipments to the United States was \$2.47 a pound compared with the overall average from all countries of \$3.38 a pound. This price is down 26 cents a pound from the previous year and is down 63 cents per pound from 2001. With its large aquacultural base and emphasis on export markets, shrimp exports from China are expected to continue to grow, but likely at a slower pace than seen over the last several years.

Over the last decade (1992 to 2002), domestic wild harvest shrimp production has ranged from a high of 338 million pounds in 1992 to a low of 278 million pounds in 1998. The 2002 harvest yielded 317 million pounds (2002 is the most recent year that domestic wild harvest data are available). Most of this harvest comes from the Gulf States, which in 2002 accounted for 72 percent of production. As with imported shrimp, the average price has been declining. In 2002 the average landed price was only \$1.45 per pound, down 30 cents per pound from the previous year and 62 cents per pound from 2000. Domestic prices are

somewhat different from imported prices as domestic prices are dockside values, while import prices are often for processed or semi-processed products. With imports of 946 million pounds in 2002, domestic wild harvest shrimp production only accounts for about 25 percent of the domestic shrimp supply. U.S. farm-raised shrimp production accounts for only a very small percentage of total domestic supply.

In 2004, shrimp imports are again expected to increase in volume, but a slightly weaker dollar may make them relatively more expensive and slow down the rate of growth. However, this may be partially offset by a strong domestic economy boosting foodservice sales, with foodservice being the prime outlet for shrimp consumption. Even though the efficiency of the farm-raised shrimp industry has been increasing, the continued decrease in prices will eventually reduce the incentive for new farmers to enter the industry and for existing farmers to expand their operations. This competition is likely to force a consolidation of the farm-raised shrimp into a small number of large producers.

### ***Mollusk Exports Up Strongly in 2003***

After falling in 2002, the quantity of mollusk exports rose strongly in 2003. The export quantities were higher for all three products (oysters, clams, and mussels). Oyster exports led the way with an increase of 50 percent to 5.8 million pounds. Unit prices of oyster exports were basically unchanged from the previous year, leading to a 49-percent increase in the value of oyster exports. Canada is the largest export market for oyster products and in 2003 was the destination for 45 percent of U.S. oyster exports on a value basis. Clam exports rose slightly (up 4 percent), but the unit price of clam exports rose strongly, pushing the value of clam exports to \$9 million, 22 percent higher than the previous year. Canada continues to be the largest market for U.S. clam exports, accounting for over 50 percent of total exports on a quantity basis. After falling for three consecutive years, U.S. mussel exports rose 13 percent on a quantity basis to 1.3 million pounds. The unit value also increased, resulting in an 18-percent increase in value. Mussel exports are destined primarily for Canada (53 percent in 2003). Over the last several years exports of processed

mussel products to Mexico have also been a growing market. The outlook for 2004 is for continued growth in mollusk exports as the dollar is forecast to be slightly weaker against a number of foreign currencies, making U.S. exports relatively less expensive. Possibly offsetting this will be the growth in the domestic economy that may keep more domestic mollusks, especially mussels, in the United States.

### ***Oyster and Clam Imports Grow, But Mussel Imports Decline***

The quantity of oyster and clam imports both increased strongly in 2003, up 12 and 17 percent. Oyster and clam imports have gone up and down over the past several years with no clear pattern of growth or decline. In both cases, the unit values for the imports stayed relatively unchanged. The largest category of oyster imports is prepared oyster products, which accounts for 68 percent of all oyster imports on a quantity basis. In 2003, clam imports totaled 8.8 million pounds. Canada is by far the largest supplier of clams to the United States, accounting for over 60 percent of the total in 2003. Although mussel imports declined in 2003, this had been a growing market over the past decade. Between 1994 and 2003, mussel imports rose from 9.7 to 43.2 million pounds, an increase of 336 percent. Most of the growth has come from larger shipments from Canada and New Zealand. In 2003, Canada supplied almost 100 percent of the live imported mussels. Due to the distance from the growing areas to the U.S. market, New Zealand concentrates on the prepared or frozen mussel market, where it is by far the largest supplier. A large percentage of mussels from Canada enter the United States as live, farm-raised mussels, especially from the provinces of Prince Edward Island and Nova Scotia. Although mussel prices may be higher in 2004 due to a stronger Canadian dollar, this may be offset by a stronger U.S. economy which would stimulate restaurant sales and in turn the demand for mussels.

### ***Ornamental Fish Exports Increase***

U.S. exports of ornamental fish increased by 2 percent to \$8.4 million in 2003. This is the second consecutive increase in exports after several years of decline. During 2003, domestic producers were

helped by the fact that a weaker dollar made U.S. exports more price competitive. The majority of ornamental fish exports stay in North America. Shipments to Canada and Mexico combined were \$5.9 million, or over 70 percent of total exports. The other major markets for U.S. ornamental fish exports are the EU countries and the higher income areas in Asia, mainly Hong Kong and Japan.

While a weaker U.S. dollar has helped ornamental fish exports, it has not seemed to negatively impact on ornamental fish imports, as they rose 4.2 percent in 2003 to \$41.3 million. While there are some imports for a wide number of countries, the large

majority comes from Southeast Asia. Thailand and Singapore are the two largest suppliers, and in 2003 they accounted for 37 percent of all ornamental fish imports. Adding in Indonesia, the Philippines, and Hong Kong the top five suppliers account for over two-thirds of all the exports of ornamental fish coming into the United States. The import outlook in 2004 is mixed. Normally a weaker dollar would favor an increase in exports and would act to depress imports, but this may be offset by a strong domestic economy that would increase the demand for ornamental fish.

## Contacts and Links

### Contact Information

David J. Harvey

(202) 694-5177

[djharvey@ers.usda.gov](mailto:djharvey@ers.usda.gov)

Laverne M. Creek (web publishing)

(202) 694-5191

[lmcreek@ers.usda.gov](mailto:lmcreek@ers.usda.gov)

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NASS Trout, <http://usda.mannlib.cornell.edu/reports/nassr/other/ztp-bb/>

National Marine Fisheries Service, Fisheries of the United States (wild harvest data), <http://www.st.nmfs.gov/st1/publications.html>

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Table 1--Catfish: Inventory as of January 1, in thousands

State	Broodfish			Fingerlings/fry			Stockers		
	2002	2003	2004	2002	2003	2004	2002	2003	2004
Alabama	70	380	80	53,000	50,800	52,800	72,800	142,100	258,100
Arkansas	170	120	125	197,000	131,000	121,000	115,300	120,200	132,600
California	15	14	11	7,350	6,100	4,700	1/	1/	1,290
Florida	5	3	15	5,000	3,300	1,120	1/	1/	0
Georgia	20	10	6	2,650	1,550	5,150	1,640	340	1/
Illinois	2	1/	1/	230	1/	1/	363	1/	1/
Kentucky	1	2	6	780	600	550	1/	1/	1/
Louisiana	1/	26	22	55,800	30,800	18,900	29,200	32,410	21,340
Mississippi	800	700	750	727,000	753,000	508,000	447,400	464,000	428,000
Missouri 3/	1/	15	1/	1/	4,040	4,460	3,850	1/	1/
North Carolina	10	13	40	8,420	7,540	6,800	2,070	6,960	4,700
Oklahoma 3/	0	0	0	0	0	0	0	0	0
South Carolina	6	1/	1/	1/	1/	1/	1/	1/	0
Tennessee 3/	0	0	0	0	0	0	0	0	0
Texas	6	14	9	670	800	1,280	360	365	1,440
Other 2/	66	6	34	8,500	633	2,311	3,395	8,851	6,077
Total	1,171	1,303	1,098	1,066,400	990,163	727,071	676,378	775,226	853,547

State	Small food-size			Medium food-size			Large food-size		
	2002	2003	2004	2002	2003	2004	2002	2003	2004
Alabama	42,800	53,500	46,100	20,800	26,100	23,300	2,850	2,700	2,240
Arkansas	45,300	44,800	49,300	26,600	27,500	22,600	2,540	2,530	1,540
California	1,510	1,420	1,840	1,640	1,450	700	270	175	165
Florida	2,000	810	630	1,150	660	470	70	115	130
Georgia	930	780	200	560	410	350	80	80	15
Illinois	70	1/	1/	49	1/	1/	54	1/	1/
Kentucky	86	630	1,080	93	540	330	52	1/	45
Louisiana	11,400	10,100	6,960	8,700	8,500	6,200	640	1,200	1,620
Mississippi	179,800	140,000	131,000	44,700	60,300	46,600	3,850	3,950	4,200
Missouri	1,460	660	720	490	410	420	175	1/	1/
North Carolina	1,600	1,800	3,000	960	1,550	3,300	100	150	200
Oklahoma 3/	0	0	0	0	0	0	0	0	0
South Carolina	530	1/	1/	330	1/	1/	40	1/	1/
Tennessee 3/	0	0	0	0	0	0	0	0	0
Texas	105	290	320	45	430	480	25	160	170
Other 2/	0	130	315	0	58	176	0	135	123
Total	287,591	254,920	241,465	106,117	127,908	104,926	10,746	11,195	10,448

1/ Data not published separately to avoid disclosing individual operations. 2/ Included Kansas in 1999.

3/ Discontinued after 1999.

Source: Catfish and Trout Production Report, NASS, USDA.

Table 2--Catfish: Supply, sales, prices, and inventory

Item	2003												2004
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
<b>Supply</b>	1,000 lb												
Grower sales 1/	55,523	55,461	65,007	57,105	58,424	52,411	54,089	54,153	51,885	57,652	51,246	48,518	55,849
Processor sales	27,584	27,586	30,485	26,135	27,370	25,487	26,427	27,627	26,853	27,875	23,416	22,482	27,140
Fresh	10,863	10,475	12,653	10,801	11,528	10,322	10,962	10,889	10,014	10,674	9,123	8,537	10,604
Whole	3,833	3,785	4,339	3,643	3,692	3,266	3,553	3,510	3,233	3,231	2,798	2,693	3,205
Fillets	5,362	5,158	6,715	5,700	6,364	5,737	5,984	6,013	5,308	6,082	5,187	4,710	5,964
Other	1,668	1,532	1,599	1,458	1,472	1,319	1,425	1,366	1,473	1,361	1,138	1,134	1,435
Frozen	16,721	17,111	17,832	15,334	15,842	15,165	15,465	16,783	16,839	17,201	14,293	13,945	16,536
Whole	1,266	1,418	1,500	1,271	1,232	1,058	1,124	1,399	1,290	1,383	1,093	958	1,185
Fillets	11,428	11,358	11,494	10,062	10,240	9,554	9,969	10,597	10,805	10,924	9,354	8,915	10,843
Other	4,027	4,335	4,838	4,001	4,370	4,553	4,372	4,742	4,744	4,894	3,846	4,072	4,508
Processor inventory 2/	11,604	10,016	10,059	10,825	11,833	11,500	11,684	11,617	10,422	10,961	12,977	13,592	12,705
Fresh	994	773	826	924	661	725	760	706	870	795	795	543	836
Whole	274	234	211	362	185	205	181	212	172	183	169	111	191
Fillets	561	420	495	445	408	440	442	398	581	495	505	343	507
Other	159	122	120	117	68	80	137	96	117	117	121	89	138
Frozen	10,610	9,240	9,233	9,901	11,172	10,775	10,924	10,911	9,552	10,166	12,182	13,049	11,869
Whole	1,265	1,596	1,794	1,749	1,617	1,454	1,290	1,066	1,007	936	862	1,178	1,401
Fillets	6,545	5,530	5,194	5,382	5,927	6,148	6,477	6,665	6,130	6,706	8,365	8,470	7,438
Other	2,800	2,114	2,245	2,770	3,628	3,173	3,157	3,180	2,415	2,524	2,955	3,401	3,030
<b>Prices</b>	Dollars per pound												
Farm price 3/	0.53	0.54	0.59	0.63	0.62	0.59	0.56	0.55	0.56	0.57	0.61	0.63	0.67
Processor prices	2.02	2.02	2.07	2.11	2.08	2.04	2.04	2.03	2.02	2.05	2.08	2.09	2.14
Fresh	1.87	1.88	1.95	1.98	2.01	2.03	1.98	2.00	1.97	2.03	2.05	2.07	2.13
Whole	1.28	1.30	1.35	1.37	1.36	1.39	1.33	1.33	1.34	1.36	1.40	1.43	1.49
Fillets	2.44	2.45	2.44	2.49	2.51	2.50	2.48	2.48	2.49	2.49	2.50	2.54	2.59
Other	1.40	1.41	1.51	1.53	1.47	1.54	1.52	1.58	1.50	1.58	1.60	1.64	1.63
Frozen	2.12	2.10	2.16	2.19	2.12	2.04	2.07	2.05	2.05	2.06	2.09	2.10	2.15
Whole	1.81	1.83	1.84	1.84	1.84	1.82	1.82	1.82	1.83	1.84	1.87	1.91	1.90
Fillets	2.39	2.39	2.43	2.46	2.42	2.41	2.39	2.39	2.37	2.39	2.41	2.43	2.47
Other	1.45	1.42	1.60	1.64	1.51	1.32	1.42	1.36	1.38	1.37	1.38	1.41	1.46

1/ Total live weight of fish delivered for processing. 2/ Inventory at end of reporting period. 3/ Live weight.

Source: NASS, USDA

Table 3--Catfish sales and prices

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual total
Catfish sold to processors							1,000 lb						
1997	42,409	45,067	48,431	45,721	43,409	42,282	43,376	44,154	43,472	46,275	40,137	40,216	524,949
1998	46,723	47,606	53,761	49,393	45,218	46,244	46,383	47,739	46,579	47,904	43,224	43,581	564,355
1999	48,723	48,891	56,310	46,830	47,703	48,445	50,074	50,372	50,414	52,407	48,118	48,341	596,628
2000	50,552	50,942	56,856	48,781	48,424	48,011	49,023	53,204	49,422	51,412	45,535	41,441	593,603
2001	46,999	50,257	57,766	52,478	51,736	47,883	47,829	51,690	49,699	52,264	44,670	43,837	597,108
2002	52,551	52,856	58,340	50,694	52,902	49,450	52,363	54,383	53,366	56,576	50,072	47,048	630,601
2003	55,523	55,461	65,007	57,105	58,424	52,411	54,089	54,153	51,885	57,652	51,246	48,518	661,474
2004	55,849												
Average price paid by processors for farm-raised catfish							Cents per pound 1/						
1997	73.0	73.0	73.0	73.0	73.0	72.0	71.0	70.0	69.0	69.0	69.0	69.0	71.2
1998	69.0	73.0	78.0	79.0	79.0	78.0	76.0	74.0	73.0	71.0	70.0	70.0	74.2
1999	70.3	71.4	73.2	75.6	77.7	77.5	76.8	74.3	72.8	71.6	71.3	71.6	73.7
2000	74.4	78.8	78.9	78.9	78.5	78.6	76.0	74.1	72.7	71.0	69.6	68.2	75.0
2001	69.3	69.6	69.7	69.4	68.7	66.9	65.6	62.4	61.0	59.6	56.6	55.4	64.5
2002	54.9	55.5	56.5	56.1	57.4	58.8	59.0	58.2	57.6	56.8	56.0	54.4	56.8
2003	52.9	54.4	58.5	63.0	61.8	58.6	56.4	55.2	56.0	56.7	61.0	62.9	58.1
2004	66.8												
Catfish sold by processors							1,000 lb						
1997	20,746	23,058	24,624	22,154	22,444	21,471	21,866	22,548	21,518	23,408	19,645	18,278	261,760
1998	23,576	26,650	26,207	23,195	22,960	23,002	22,973	24,089	22,805	23,241	21,581	21,119	281,398
1999	23,107	25,780	28,544	23,488	23,964	23,720	25,069	24,618	24,430	25,229	22,344	22,372	292,665
2000	25,412	25,354	29,161	24,924	24,763	25,342	24,911	25,847	23,743	25,036	21,911	20,752	297,156
2001	24,507	25,968	28,752	25,167	24,728	23,690	24,816	26,004	24,210	25,083	21,807	21,635	296,367
2002	27,173	29,308	28,645	25,023	27,261	24,670	26,441	27,961	26,498	27,800	23,939	22,930	317,649
2003	27,584	27,586	30,485	26,135	27,370	25,487	26,427	27,627	26,853	27,875	23,416	22,482	319,327
2004	27,140												
Average price received by processors for all catfish							Cents per pound						
1997	227.7	230.2	230.4	227.3	227.9	226.0	225.6	225.3	224.8	220.5	220.3	223.3	225.8
1998	220.0	227.9	236.6	237.7	239.5	234.4	234.6	232.9	229.6	226.7	226.4	224.0	230.9
1999	225.6	226.2	231.8	236.2	239.5	239.9	239.7	234.6	236.9	235.9	235.6	230.9	234.4
2000	235.2	240.4	244.8	244.6	244.5	237.7	238.7	239.6	237.1	232.7	232.4	227.1	237.9
2001	231.8	236.9	233.2	234.1	232.7	227.6	226.2	223.8	218.5	216.3	211.4	209.0	225.1
2002	208.4	210.3	206.6	208.2	209.0	209.4	207.2	205.9	207.4	205.2	203.8	202.5	207.0
2003	202.2	201.6	206.9	210.7	207.5	203.5	203.6	202.9	202.1	204.7	207.6	208.7	205.2
2004	214.4												

1/ Live weight. Source: Monthly Catfish Processing Report, NASS, USDA.



Table 5--Quantity and value of U.S. exports of selected seafood products

Commodity	2000	2001	2002	2003	2000	2001	2002	2003
<b>Exports</b>		\$1,000				1,000 lb		
Ornamental fish	8,243	6,934	8,159	8,413	0	0	0	0
Trout, live	185	271	227	326	0	0	0	0
Trout, fresh & frozen	2,893	1,577	1,632	5,047	1,816	1,077	1,163	2,592
Atlantic salmon, fresh	34,471	37,945	16,167	22,592	15,942	18,417	8,456	11,337
Pacific salmon, fresh 1/	37,048	22,166	45,961	45,299	38,750	20,651	29,672	38,902
Atlantic salmon, frozen	583	139	160	205	299	84	84	99
Pacific salmon, frozen 1/	273,271	236,604	180,724	193,846	161,515	167,933	132,646	150,766
Canned & pre. salmon 2/	147,127	167,825	137,902	147,250	81,098	109,109	95,955	94,338
Shrimp, frozen	62,891	54,553	52,753	52,489	15,162	13,905	13,890	16,466
Shrimp, fresh & pre. 3/	52,738	51,481	50,252	52,652	14,229	13,640	13,148	14,307
Oysters 4/	7,227	8,238	8,659	12,909	3,229	3,915	3,896	5,827
Mussels 5/	1,681	1,595	1,406	1,665	1,513	1,485	1,178	1,337
Clams 6/	5,649	6,593	6,585	8,022	3,413	3,939	3,861	4,003
<b>Imports</b>		\$1,000				1,000 lb		
Ornamental fish	40,773	40,910	39,686	41,308	0	0	0	0
Trout, live	131	99	167	172	0	0	0	0
Trout, fresh & frozen	11,291	11,507	14,514	14,969	7,083	7,382	9,887	9,023
Atlantic salmon, fresh	654,725	685,289	713,169	760,916	257,218	316,837	356,164	349,474
Pacific salmon, fresh 1/	42,633	30,462	36,008	43,315	19,908	17,472	23,210	22,462
Atlantic salmon, frozen	85,658	87,483	104,525	154,718	32,089	41,176	56,883	64,999
Pacific salmon, frozen 1/	20,527	14,940	19,934	33,612	12,866	10,515	18,317	26,658
Canned & pre. salmon 2/	32,021	36,199	45,632	67,581	8,893	11,298	16,378	25,177
Shrimp, frozen	3,035,173	2,957,944	2,633,278	2,975,346	621,231	714,706	730,002	878,124
Shrimp, fresh & pre. 3/	707,565	678,853	788,811	785,112	139,526	167,877	216,439	234,084
Oysters 4/	40,763	36,914	36,867	42,420	20,810	18,438	19,084	22,257
Mussels 5/	47,359	43,610	52,135	45,705	43,141	39,973	45,695	43,236
Clams 6/	7,504	8,296	7,019	7,875	8,074	8,007	7,457	8,752
Tilapia 7/	101,378	127,797	174,215	241,206	89,218	124,202	148,122	198,957

1/ Also contains salmon with no specific species noted. 2/ Includes smoked and cured salmon. 3/ Shrimp, canned, breaded, or prepared.

4/ Oysters, fresh or prepared. 5/ Mussels, fresh or prepared. 6/ Clams, fresh or prepared. 7/ Tilapia, frozen whole fish plus fresh and frozen fillets.

Source: Bureau of the Census, U.S. Department of Commerce.

Table 6--Quantity of U.S. tilapia imports by country, in pounds

Country	Whole, frozen			Fillets, fresh			Fillets, frozen			Total		
	2001	2002	2003	2001	2002	2003	2001	2002	2003	2001	2002	2003
Belize	0	0	0	0	0	0	0	0	0	0	0	0
Honduras	0	0	0	3,169,571	6,335,086	6,297,596	0	0	0	3,169,571	6,335,086	6,297,596
Nicaragua	0	0	0	8,479	1,920	6,369	37,357	54,275	18,558	45,836	56,195	24,927
Costa Rica	0	0	3,519	6,853,929	7,068,003	8,809,851	0	5,022	5,401	6,853,929	7,073,025	8,818,770
Jamaica	0	0	0	201,944	36,021	0	60,649	42,383	39,950	262,592	78,404	39,950
Colombia	0	17,403	6,614	71,026	0	0	0	8,730	0	71,026	26,133	6,614
Ecuador	210,317	35,895	315,816	10,855,988	14,584,622	20,716,443	307,586	598,809	411,043	11,373,891	15,219,326	21,443,302
Thailand	107,582	550,182	267,449	3,505	59,251	14,497	461,218	724,191	2,071,790	572,305	1,333,624	2,353,737
Indonesia	85,757	5,589	11,960	0	0	0	4,803,493	5,671,230	7,898,462	4,889,249	5,676,819	7,910,422
China	23,963,559	43,244,408	63,410,886	421,189	1,860,788	1,888,531	5,575,396	13,285,133	34,958,316	29,960,144	58,390,330	100,257,732
Taiwan	60,845,432	45,546,289	43,350,370	167,854	543,458	620,527	4,703,067	6,086,629	5,444,623	65,716,353	52,176,376	49,415,520
Other	170,691	433,105	758,808	812,909	787,626	1,222,138	303,044	542,080	407,456	1,286,644	1,762,811	2,388,402
Total	85,383,338	89,832,871	108,125,420	22,566,394	31,276,775	39,575,952	16,251,809	27,018,484	51,255,601	124,201,540	148,128,130	198,956,973

Value of U.S. tilapia imports by country

Country	Whole, frozen			Fillets, fresh			Fillets, frozen			Total		
	2001	2002	2003	2001	2002	2003	2001	2002	2003	2001	2002	2003
Belize	0	0	0	0	0	0	0	0	0	0	0	0
Honduras	0	0	0	8,634,514	17,350,505	16,911,059	0	0	0	8,634,514	17,350,505	16,911,059
Nicaragua	0	0	0	20,937	4,800	17,333	80,052	99,826	29,062	100,989	104,626	46,395
Costa Rica	0	0	8,310	16,485,179	18,389,069	22,608,592	0	15,196	13,921	16,485,179	18,404,265	22,630,823
Jamaica	0	0	0	647,396	103,565	0	118,700	75,561	77,952	766,096	179,126	77,952
Colombia	0	17,068	5,940	187,973	0	0	0	7,405	0	187,973	24,473	5,940
Ecuador	261,635	38,677	277,286	31,805,661	40,240,895	55,937,569	652,652	1,246,006	877,003	32,719,948	41,525,578	57,091,858
Thailand	112,276	341,854	177,645	10,940	124,481	38,876	818,293	1,286,047	3,759,683	941,509	1,752,382	3,976,204
Indonesia	70,350	2,751	0	0	0	0	10,846,191	13,043,456	17,698,924	10,916,541	13,046,207	17,698,924
China	10,496,763	20,238,538	30,496,667	617,305	2,978,696	2,509,576	8,596,944	20,898,107	51,501,163	19,711,012	44,115,341	84,507,406
Taiwan	27,020,328	23,175,287	23,748,663	225,560	698,640	1,148,778	7,213,755	11,048,081	9,623,082	34,459,643	34,922,008	34,520,523
Other	91,137	217,110	449,569	2,203,592	1,803,238	2,818,694	578,407	770,306	470,263	2,873,136	2,790,654	3,738,526
Total	38,052,489	44,031,285	55,164,080	60,839,057	81,693,889	101,990,477	28,904,994	48,489,991	84,051,053	127,796,540	174,215,165	241,205,610

Source: Bureau of the Census, U.S. Department of Commerce.

Table 7--Quantity of U.S. Atlantic salmon imports by country, in pounds

Country	Fresh			Frozen			Fillets 1/			Total		
	2001	2002	2003	2001	2002	2003	2001	2002	2003	2001	2002	2003
Canada	107,394,512	124,214,825	89,442,031	45,122	119,399	145,563	30,588,666	36,759,419	29,499,940	138,028,300	161,093,643	119,087,534
Chile	7,974,492	7,651,620	7,645,983	2,165,856	2,012,701	3,641,977	176,381,466	209,102,130	226,753,064	186,521,814	218,766,451	238,041,024
Iceland	1,617,691	668,084	2,120,276	186,853	302,989	45,443	236,701	147,064	392,544	2,041,246	1,118,138	2,558,264
Norway	1,066,546	1,691,283	1,816,511	4,827,768	3,963,152	4,683,644	8,869,776	10,377,901	12,586,747	14,764,089	16,032,336	19,086,902
Faroe Islands	1,434,529	1,664,096	4,861,430	267,899	85,415	41,378	125,537	86,076	1,984	1,827,964	1,835,587	4,904,792
United Kingdom	12,987,759	12,814,650	25,766,214	111,670	0	582	821,161	546,214	1,922,160	13,920,590	13,360,864	27,688,956
Other	80,995	452,589	1,149,267	740,446	161,747	217,356	94,117	225,919	1,738,576	915,557	840,255	3,105,199
<b>Total</b>	<b>132,556,524</b>	<b>149,157,147</b>	<b>132,801,711</b>	<b>8,345,613</b>	<b>6,645,403</b>	<b>8,775,944</b>	<b>217,117,423</b>	<b>257,244,723</b>	<b>272,895,015</b>	<b>358,019,560</b>	<b>413,047,273</b>	<b>414,472,670</b>

Value of U.S. Atlantic salmon imports by country

Country	Fresh			Frozen			Fillets 1/			Total		
	2001	2002	2003	2001	2002	2003	2001	2002	2003	2001	2002	2003
Canada	248,893,652	266,366,162	207,165,583	82,600	167,045	256,519	100,474,009	106,900,108	94,884,112	349,450,261	373,433,315	302,306,214
Chile	11,661,096	10,548,918	12,198,298	3,465,906	2,908,569	6,769,724	346,456,467	370,960,460	485,482,668	361,583,469	384,417,947	504,450,690
Iceland	2,232,940	743,141	2,789,904	1,154,126	1,666,164	293,570	693,853	496,893	1,118,949	4,080,919	2,906,198	4,202,423
Norway	1,859,644	3,249,628	3,192,941	8,193,024	6,400,876	8,588,135	25,928,380	25,687,017	34,502,299	35,981,048	35,337,521	46,283,375
Faroe Islands	1,607,982	1,936,445	6,231,249	413,491	65,672	72,037	251,542	115,769	6,471	2,273,015	2,117,886	6,309,757
United Kingdom	15,593,772	16,958,053	42,576,756	303,334	0	9,768	1,397,004	1,101,381	5,126,777	17,294,110	18,059,434	47,713,301
Other	142,963	857,124	1,854,483	1,547,542	233,288	423,015	418,245	391,419	2,110,248	2,108,750	1,481,831	4,387,746
<b>Total</b>	<b>281,992,049</b>	<b>300,659,471</b>	<b>276,009,214</b>	<b>15,160,023</b>	<b>11,441,614</b>	<b>16,412,768</b>	<b>475,619,500</b>	<b>505,653,047</b>	<b>623,231,524</b>	<b>772,771,572</b>	<b>817,754,132</b>	<b>915,653,506</b>

1/ Includes both fresh and frozen fillets.

Source: Bureau of the Census, U.S. Department of Commerce.

Table 8--Quantity of U.S. shrimp imports by country, in 1,000 pounds

Country	Frozen			Fresh			Other			Total		
	2001	2002	2003	2001	2002	2003	2001	2002	2003	2001	2002	2003
Mexico	65,654	53,113	55,845	454	315	101	67	134	258	66,175	53,562	56,204
Ecuador	56,285	62,654	72,670	2	4	21	2,474	2,852	2,329	58,760	65,509	75,021
Brazil	21,638	39,121	48,023	8	20	1	0	0	0	21,646	39,141	48,024
India	63,584	89,888	90,738	665	783	670	8,232	6,871	8,833	72,482	97,542	100,240
Bangladesh	19,238	18,816	17,706	0	0	0	0	0	247	19,238	18,816	17,953
Thailand	186,460	128,300	165,012	208	206	302	113,348	124,971	128,383	300,017	253,477	293,698
Vietnam	57,424	72,746	99,613	74	97	215	15,842	25,688	26,667	73,340	98,530	126,495
Indonesia	32,202	34,562	44,091	73	60	61	2,662	3,819	3,606	34,938	38,441	47,758
Philippines	2,961	2,021	2,140	1	4	2	913	876	563	3,876	2,900	2,705
China	56,726	80,510	132,321	884	916	824	4,163	27,757	45,451	61,772	109,183	178,597
Others	152,161	148,167	149,965	1,020	1,115	618	16,828	19,934	14,931	170,008	169,216	165,515
Total	714,333	729,896	878,124	3,389	3,520	2,816	164,530	212,901	231,269	882,251	946,318	1,112,209

Value of U.S. shrimp imports by country, in \$1,000

Country	Frozen			Fresh			Other			Total		
	2001	2002	2003	2001	2002	2003	2001	2002	2003	2001	2002	2003
Mexico	379,714	262,665	292,376	862	626	288	385	779	1,425	380,961	264,070	294,088
Ecuador	213,298	190,155	204,919	12	18	74	9,310	8,937	6,264	222,619	199,110	211,258
Brazil	63,623	87,763	96,762	15	40	2	0	0	0	63,639	87,803	96,764
India	243,417	343,454	382,664	7,577	8,120	6,931	13,756	11,984	19,313	264,750	363,558	408,907
Bangladesh	92,244	87,626	81,708	0	0	0	0	0	1,128	92,244	87,626	82,836
Thailand	799,813	508,805	555,625	791	1,067	1,861	465,550	466,315	440,208	1,266,153	976,186	997,694
Vietnam	296,086	359,230	464,762	116	249	365	85,281	121,990	129,887	381,483	481,469	595,014
Indonesia	143,632	137,222	156,966	459	383	305	11,417	15,487	10,777	155,508	153,093	168,047
Philippines	16,506	10,137	10,269	6	16	9	840	952	651	17,352	11,105	10,929
China	171,102	201,891	319,729	7,708	7,343	7,420	12,771	88,415	114,756	191,581	297,649	441,905
Others	536,325	444,913	409,558	3,974	3,962	2,613	48,082	52,043	40,834	588,381	500,919	453,005
Total	2,955,762	2,633,861	2,975,337	21,520	21,825	19,868	647,391	766,902	765,244	3,624,672	3,422,588	3,760,449

Source: Bureau of the Census, U.S. Department of Commerce.