



United States Department of Agriculture  
National Agricultural Statistics Service

# AQUACULTURE



Cooperating with the Florida Department of Agriculture & Consumer Services  
2290 Lucien Way, Suite 300 Maitland, FL 32751  
(407) 648-6013 · (407) 648-6029 FAX · www.nass.usda.gov/fl

June 2013

## Florida Aquaculture Sales Total \$69 Million in 2012

Florida aquaculture producers reported sales in 2012 of \$69 million based upon a survey conducted for the Florida Department of Agriculture and Consumer Services, Division of Aquaculture. This survey was administered by the Florida Agricultural Statistics Service.

Reported sales in 2012 were above those of \$66 million reported in 2005, the last time this survey was conducted. There were 686 operations that reported being in business during 2012; of those, 404 operations reported appreciable sales. The operations without sales reflect either new operations which have not yet sold a product or operations in business that did not market any product in 2012.

Florida aquaculturists produced animals or plants for ornamental, food or miscellaneous markets. Ornamental sales totaled \$35.5 million and consisted of freshwater or marine animals and plants that included freshwater fish, crayfish or marine fish, corals, live rock, snails, and shrimp sold to the aquarium or water garden markets. Sales of aquaculture products for human consumption totaled \$24.1 million and included freshwater or marine fish, clams, oysters, shrimp, prawns, alligators, and turtles.

### Aquaculture, Value of Sales - Florida: 2012 and 2005

Item	Value of Sales		Operations with Sales	
	2012	2005	2012	2005
	(dollars)	(dollars)		
Ornamental Fish.....	27,269,000	33,232,000	101	133
Mollusks .....	11,889,000	10,694,000	139	153
Alligators .....	7,995,000	4,070,000	10	14
Aquatic Plants .....	5,327,000	8,360,000	19	17
Other Food Fish .....	2,978,000	1,731,000	31	19
Tilapia .....	1,227,000	477,000	47	18
Catfish.....	390,000	1,434,000	17	23
Live Rock .....	373,000	341,000	12	6
All Other Aquaculture .....	11,303,000	5,436,000	(NA)	(NA)
Total.....	68,751,000	65,775,000	404	359

(NA) Not Available

## Labor

In 2012, aquaculture producers reported employing paid and unpaid workers: 402 operations reported 765 unpaid workers (typically family members or partners), 158 operations reported 864 full-time workers, and 134 operations reported 322 part-time workers.

### Aquaculture Labor - Florida: 2012

Labor	Operations	Total Workers
Unpaid Workers.....	402	765
Full-Time Paid Workers .....	158	864
Part-Time Paid Workers .....	134	322

## Water Area

In 2012, the 686 operations used 4,490 acres of water. Of those 686 operations, 61 percent were less than 3 acres in size, accounting for 9 percent of the water area. Over 36 percent of the operations used 3 or more acres but less than 50 acres. Only 2 percent of the operations used 50 acres or more of water area, however, those operations accounted for 37 percent of the total water area.

### Aquaculture, Size of Operation - Florida: 2012

Water Acreage	Operations	Acres	Percent Operations	Percent Acres
Under 3 .....	420	413	61.3	9.2
3 to 5.9 .....	112	465	16.3	10.4
6 to 19.9 .....	107	1,042	15.6	23.2
20 to 49.9 .....	31	891	4.5	19.8
50 and up .....	16	1,679	2.3	37.4
Total .....	686	4,490	100.0	100.0

### Aquaculture for Ornamental Markets

In 2012, sales of ornamental fish reported by 101 producers were \$27.3 million, down from \$33.2 million reported by 133 operations in 2005. Producers reported 929 acres in ponds and over 4.65 million gallons in tanks used to raise ornamental fish. Ornamental fish are sold for aquarium and water garden use and includes both tropical and temperate species (i.e. koi).

In 2012, sales of live rock reported by 12 producers were \$373,000, up from \$341,000 reported by 6 operations in 2005. Live rock producers lease acreage in coastal waters off the west coast of Florida, in the Keys, and in upland tank systems. Live rock is sold for marine aquarium use.

In 2012, sales of aquatic plants reported by 19 producers were \$5.3 million, down from \$8.4 million reported by 17 operations in 2005. These totals include plants for water gardens, aquariums, and wetlands restoration. Plants for food markets such as watercress were not included.

### Aquaculture for Food Markets

In 2012, sales of mollusks reported by 139 producers were \$11.9 million, up from \$10.7 million reported by 153 operations in 2005. Hard clam sales comprised 98 percent of the total, while sunray venus clams and oysters accounted for the rest. Operations reported 255.8 million total clam seed planted and 136.3 million clams sold in 2012. Survival rate to harvest was reported to average 59.1 percent.

In 2012, sales of shrimp and crayfish reported by 18 producers were \$7.6 million. Thirteen (13) shrimp producers reported nearly \$7.5 million in sales, while 7 crayfish producers reported \$114,000. No operations reported sales of prawn in 2012.

In 2012, sales of food and bait fish reported by 74 producers were \$4.6 million, up from \$3.6 million reported by 49 operations in 2005. Forty-seven (47) operations reported \$1.2 million in sales of tilapia in 2012, up from 18 operations reporting \$477,000 in sales in 2005. Seventeen (17) operations reported \$390,000 sales of catfish in 2012, down from 23 operations reporting \$1.4 million in sales in 2005. Thirty-one (31) operations reported \$3.0 million in sales of other food and bait fish (bass, sturgeon, bream, brim, carp, cobia, crappie, killifish, pompano, redfish, sunfish, trout, and others) in 2012, up from 19 operations reporting \$1.7 million in sales in 2005.

## Aquaculture, Value of Sales - Florida: 2012

Type	Operations With Sales	Value of Sales
		(dollars)
<b>Freshwater Ornamental Fish</b> .....	90	26,035,000
Egg Layers .....	78	19,485,000
Live Bearers .....	45	6,550,000
<b>Marine Ornamental Fish</b> .....	15	1,234,000
<b>Freshwater Ornamental Invertebrates</b> .....	12	437,000
<b>Marine Ornamental Invertebrates</b> .....	47	2,439,000
Coral .....	27	1,052,000
Live Rock .....	12	373,000
Clams .....	8	200,000
Other Marine Ornamental Invertebrates <sup>1</sup> .....	7	814,000
<b>Food &amp; Bait Fish</b> .....	74	4,595,000
Tilapia .....	47	1,227,000
Catfish .....	17	390,000
Other Food Fish <sup>2</sup> .....	31	2,978,000
<b>Mollusks</b> .....	139	11,889,000
Hard Clam .....	137	11,594,000
Other Mollusks <sup>3</sup> .....	8	295,000
<b>Shrimp/Prawn/Crayfish</b> .....	18	7,603,000
Shrimp .....	13	7,489,000
Crayfish .....	7	114,000
<b>Reptiles</b> .....	33	9,192,000
Alligator Live Animals .....	7	1,412,000
Other Alligator Products <sup>4</sup> .....	5	6,583,000
Turtles and Turtle Products .....	28	1,197,000
<b>Aquatic Plants</b> .....	19	5,327,000
Aquarium Plants .....	11	4,844,000
Other Aquatic Plants <sup>5</sup> .....	12	483,000
<b>Total Reported Aquaculture Sales</b> .....	404	68,751,000

<sup>1</sup> Includes shrimp, snails, and others.

<sup>4</sup> Includes eggs, hides, and meat.

<sup>2</sup> Includes bream, bass, trout, sturgeon, and others.

<sup>5</sup> For water garden and wetlands restoration.

<sup>3</sup> Includes sunray venus clams and oysters.

## Clam Seed Planted and Survival Rate - Florida: 2012

	Seed Planted	Survival %
Hard Clam .....	250,643,000	59.07
Other Mollusks .....	5,170,000	59.00
Total .....	255,813,000	59.06

## Alligator Inventory by Type - Florida: 2012 and 2005

Type	2012	2005
Number of Operations .....	14	14
Brood Stock .....	14,200	1,800
Hatchlings .....	10,500	20,600
All other .....	29,100	33,900
Total .....	53,800	56,300

## Reptiles

In 2012, of the fourteen operations with alligators, ten reported \$8.0 million in sales of alligator eggs, hides, meat, and whole alligators, up from \$4.1 million reported by 14 operations in 2005. Alligator hides accounted for over 62 percent of total sales in 2012, compared to 69 percent in 2005. Fourteen (14) operations reported a total inventory of 53,800 alligators on hand, down from 56,300 on 14 operations in 2005.

In 2012, twenty-eight turtle producers reported \$1.2 million in sales of turtles, up from \$222,000 reported by 5 operations in 2005. Nearly 90 percent of the total value of sales of turtles came from live turtles in 2012, with the rest coming from turtle eggs.

### Aquaculture, Value of Sales by Category - Florida: 2012, 2005, 2003, and 2001

Year	Total	Ornamental Fish	Aquatic Plants	Mollusks	Alligators	Other
	(1,000 dollars)	(1,000 dollars)	(1,000 dollars)	(1,000 dollars)	(1,000 dollars)	(1,000 dollars)
2012.....	68,751	27,269	5,327	11,889	7,995	16,271
2005.....	65,775	33,232	8,360	10,694	4,070	9,419
2003.....	82,800	47,229	7,733	12,970	2,450	12,418
2001.....	86,200	42,424	8,102	18,264	3,250	14,260

## Methodology

The Florida Agricultural Statistics Service collected aquaculture data by mail, telephone, and field enumeration based on a list of aquaculture producers provided by the Florida Department of Agriculture and Consumer Services,' Division of Aquaculture. During the summarization process, no data was estimated for operations that did not respond. The totals provided in this report are from completed reports only.

## 2013 Census of Aquaculture

NASS will be conducting the 2013 Census of Aquaculture as a follow-on study to the 2012 Census of Agriculture. The Census of Aquaculture collects detailed information about the aquaculture industry, including all aquaculture or aquaculture products produced and sold in 2013. The census will provide a comprehensive inventory of aquaculture farms, acreage, methods of production, production and sales by aquaculture species, and sales outlets. The last Census of Aquaculture was conducted in 2005 as a follow-on study to the 2002 Census of Agriculture. To access data from the 2005 Census of Aquaculture publication and review the previous questionnaire (located in Appendix B), please visit: <http://www.agcensus.usda.gov/Publications/2002/Aquaculture/>.