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AQUACULTURE



FLORIDA
AGRICULTURE

June 2004

FLORIDA AQUACULTURE SALES TOTAL \$95.5 MILLION IN 2003

Florida aquaculture producers reported sales of \$95.5 million in 2003 in a survey conducted for the Division of Aquaculture, Florida Department of Agriculture and Consumer Services. This compares to sales of \$99.5 million reported for 2001 and is the third highest volume of sales since the survey was begun in 1988. The largest volume of sales of aquaculture products was \$102 million in 1997.

In 2003, sales increased for Tropical Fish, Tilapia, Catfish, Live Rock, and Other Aquatics. Sales decreased for Aquatic Plants, Clams and Oysters, Alligators, Shrimp, and Other Fish.

In 2003, there were 544 operations using 6,450 acres, compared to 7,010 acres used by 684 operations in 2001. The survey also found 80 active operations in 2003 without sales, reflecting either new operations which have not yet sold a product or operations in business but which did not sell any product in 2003.

There were 30 operations reporting sales to foreign markets totaling \$5.3 million.

A large percentage of aquaculture operations in Florida are small. Of the 544 operations in 2003, 43.9 percent were less than 3 acres in size. These represent many of the clam producers, who lease 2 acres of water in the Gulf of Mexico or the Indian River Lagoon, as well as some of the small tropical fish farms. Another 20.6 percent of the operations used between 3 and 6 acres of land and/or water. Only about 3 percent of the operations used 50 acres or more.

AQUACULTURE - Florida, 2003				
	Producers		Net Sales	% of Total
	Total	With Sales		
Tropical Fish	151	146	\$47,228,600	49.4
Aquatic Plants	37	35	\$20,433,100	21.4
Clams ¹ & Oysters	244	200	\$12,969,900	13.6
Shrimp	10	7	\$5,100,800	5.3
Other Fish ²	26	23	\$2,822,300	3.0
Alligators	14	10	\$2,452,400	2.6
Tilapia	17	15	\$1,493,000	1.6
Catfish	41	34	\$1,486,700	1.6
Other Aquatics ³	14	14	\$895,300	0.9
Live Rock	7	6	\$660,900	0.7

¹ Includes clam seed

² Hybrid Striped Bass, Koi, Largemouth Bass, Bream, and Carp

³ Crawfish, Eels, Snails, Turtles, Crabs, and Frogs

AQUACULTURE - Size of Operation Florida, 2003		
Acres in Operation	Number of Operations	Percent of Total
less than 3	239	43.9
3 to 5.9	112	20.6
6 to 19.9	122	22.4
20 to 49.9	55	10.1
50 to 99.9	12	2.2
100 or more	4	0.7
Total	544	100.0

Owners and/or operators of Florida's aquaculture operations provide much of the labor required. Operators reported working an average of 32 hours per week on the farms. A total of 485 persons worked without pay on 233 operations. These are typically family members or partners. There were 316 operations with no hired labor; the other 228 farms hired 928 full-time workers and 731 part-time workers.

AQUACULTURE - Labor - Florida, 2003		
	Farms	Workers
No hired labor	316	--
Unpaid labor	233	485
Paid labor - full time	134	928
Paid labor - part time	152	731

FLORIDA AQUACULTURE - Number of Producers, Area in Production, Sales - 2003

	Producers		Area in Production ¹						Net Value of Sales
	Total	With Sales	Acres		Square Feet		Gallons		
			2003	2004	2003	2004	2003	2004	
			(000)			(000)			
Tropical Fish	151	146	--	--	43,922.1	42,625.4	813.5	812.5	\$47,228,600
Egg Layers	129	126	--	--	28,334.9	27,438.5	813.5	812.5	\$35,768,400
Live Bearers	73	69	--	--	15,587.2	15,186.9	--	--	\$11,666,200
Marine Ornamentals (included with Egg Layers)									
Aquatic Plants	37	35	402	407	37.6	37.6	--	--	\$20,433,100
Water Garden	23	20	310	310	34.0	34.0	--	--	2
Aquarium	12	12	52	52	3.6	3.6	--	--	2
Wetlands	13	13	40	45	--	--	--	--	\$1,612,900
Mollusks	244	200	930	955	71.3	67.5			\$12,969,900
Clams	237	192	896	917	17.9	14.2	--	--	\$12,098,400
Seed Clams	22	15	34	38	53.4	53.3	--	--	\$871,600
Oysters (included with Clams)									
Shrimp	10	7	105	135	--	--	217,425	285,366	\$5,100,900
Alligators	14	10	51	51	143.2	143.2	--	--	\$2,452,400
Hides	14	8	--	--	--	--	--	--	\$1,640,400
Meat	14	9	--	--	--	--	--	--	\$812,000
Other Fish ³	26	23	238	233	2.8	2.8	488	488	\$2,822,300
Catfish	41	34	776	702	--	--	--	--	\$1,486,700
Food	37	30	707	633	--	--	--	--	\$1,295,700
Other	6	5	69	69	--	--	--	--	\$191,000
Tilapia	17	15	63	57	--	--	1,027	1,057	\$1,493,300
Live Rock	7	6	18	na	--	--	--	--	\$660,900
Other Aquatics ⁴	14	14	19	na	166.7	na	409	na	\$895,000
All Species	544	464							\$95,543,400

¹ For 2004, area expected to be used.

² Data not published to avoid disclosure of individual data.

³ Hybrid Striped Bass, Koi, Largemouth Bass, Carp, Bream

⁴ Crawfish, Eels, Snails, Turtles, Crabs, Frogs

TROPICAL FISH

There were fewer producers of tropical fish in 2003, but net sales increased slightly. Sales reached **\$47.2 million** from 136 producers in 2003, compared to \$42.4 million from 160 producers in 2001. Operators reported working an average of 46.1 hours per week. There were 79 farms which hired 209 paid workers.

Net sales of egglayers and marine ornamentals amounted to \$35.7 million from 126 producers, using 28.3 million square feet of ponds and 813,400 tank gallons. Net sales of livebearers totaled \$11.7 million from 69 producers using 15.6 million square feet of ponds. Sales to foreign markets were reported by 15 producers.

Tropical fish production in Florida is centered in the West Central counties of Hillsborough and Polk, which have approximately 62 percent of the tropical fish farms in the State. Another 22 percent of the farms are in the East Coast counties of Brevard down to Dade.

CLAMS & OYSTERS

Sales of clams, clam seed, and oysters decreased to **\$13 million** in 2003, from \$18.3 million in 2001. There were 31 fewer producers with sales in 2003 and the average price for clams was lower than it was in 2001. Producers sold 134 million hard clams at an average price of 9 cents, compared to 142 million sold in 2001 at an average price of 11 cents. Sales of hard clams and oysters totaled \$12.1 million and sales of clam seed amounted to \$871,000. Respondents reported an average survival to harvest of 54 percent.

Operators reported working an average of 25.0 hours per week. They hired 178 paid workers on 89 operations. Hard clam producers used 930 acres of water leases and 18,000 square feet of raceways. Clamseed producers used 34 acres and 53,000 square feet.

CLAM PLANTINGS 2002-2004	
	Number of Clams
Clams planted in 2002	289,791,000
Clams planted in 2003	350,398,000
Clams to be planted in 2004	392,010,000

Demand for clams has been lower than in previous years, and some producers, especially in the Southwestern part of the State, were hurt by poor weather conditions. There were 20 producers who sold seed clams in 2001 but not in 2003. The difficult economic conditions are reflected in the fact that 35 producers indicated they were undecided about how many clams, if any, to plant in 2004.

Clam production is concentrated in the Indian River estuary and the coastal waters of the Gulf of Mexico, in three main areas: the "Big Bend" counties of Dixie, Levy, and Citrus; the Southern West coast counties of Charlotte and Lee; and the Central East coast counties of Volusia, Brevard, and Indian River.

AQUATIC PLANTS

Sales of aquatic plants in 2003, at **\$20.4 million**, were down very slightly from sales of \$21.3 million in 2001. The 37 producers (35 of whom had sales) used 402 water surface acres and 37,600 square feet of vats. Sales to foreign markets were reported by 7 producers.

Aquatic plants include plants for water gardens and aquariums and farm-produced plants used in wetlands restoration. Sales also include watercress. Sales do not include plants harvested from the wild or resales of plants purchased from other growers.

Operators reported working an average of 30.3 hours per week and hiring 393 paid workers on 22 farms.

ALLIGATORS

Sales of alligator hides and meat decreased to **\$2.45 million** from \$3.25 million in the previous survey. Eight producers sold hides valued at \$1.64 million, at an average of \$99 per hide. Nine producers sold meat valued at \$812 thousand, at an average of \$4.11 per pound. Producers used 51 water surface acres and 143,000 square feet of building space. The low demand and sales are partially due to weak economic conditions in Japan and Europe.

Operators reported working an average of 31.8 hours per week. There were 28 paid workers on 8 farms. Sales to foreign markets were reported by three operations.

ALLIGATOR INVENTORY, By Type - Florida		
	2/1/02	2/1/04
Number of producers	19	13
Total alligators on hand	87,700	69,000
Brood Stock	5,300	3,800
Hatchlings	26,400	23,700
All other	45,500	41,600

TILAPIA

There were fewer producers of tilapia in 2003 than in 2001, but sales increased from \$979 thousand to **\$1.49 million**. The 17 producers (15 of whom had sales) used 63 acres of ponds and 1.03 million tank gallons. Operators reported working an average of 33.2 hours per week and hiring 15 paid workers on 7 farms. Sales to foreign markets were reported by two operations.

CATFISH

In 2003, there were 41 producers of catfish, 34 of whom reported sales. Producers sold **\$1.49 million** worth of foodsize and fingerlings, compared to \$1.3 million in 2001, and used 702 water acres. Operators reported working an average of 19.7 hours per week and six operations hired a total of 15 paid workers.

OTHER AQUATICS

Other aquatics include eels, snails, turtles, frogs, crabs, crawfish, etc. Sales from 14 producers totaled **\$895,000** in 2003, compared to \$417,000 in 2001. Operators worked an average of 45.1 hours per week.

SHRIMP

In 2003, there were 10 producers of shrimp, 7 of whom reported sales amounting to **\$5.1 million**, compared to \$7.4 million in 2001. Producers used 105 water acres and 217 million tank gallons. Operators reported working an average of 45.7 hours per week and six operations hired a total of 488 paid workers.

OTHER FISH

Sales of other fish (koi, bass, bream, carp, etc.) from 23 producers amounted to **\$2.82 million** in 2003, compared to \$3.2 million in 2001. Operators reported working an average of 11.6 hours per week and hiring 46 paid workers on 14 operations. Three operations reported sales to foreign markets.

LIVE ROCK

Over 200,000 pounds of live rock were sold by six producers, totaling about **\$660,000** in 2003, up about 14 percent from 2001. One operation reported sales to foreign markets.

AQUACULTURE PRODUCERS BY COUNTY 2003

