FLORIDA AQUACULTURE INDUSTRY OVERVIEW

Florida Department of Agriculture and Consumer Services Division of Aquaculture

AQUACULTURE IS AGRICULTURE

The **Florida Aquaculture Policy Act** (<u>Chapter 597, Florida Statutes</u>) established that aquaculture *is* agriculture, and consolidated state regulatory responsibilities under the Florida Department of Agriculture and Consumer Services (FDACS). Florida's aquaculture industry produces the greatest variety of aquatic species of any state in the nation. Moreover, aquaculture is Florida's most diverse agribusiness. The state's

subtropical climate, extensive marine and freshwater resources, cargo shipping infrastructure and extensive coastline have made the state's aquaculture industry uniquely diverse. There are approximately 1,000 certified aquaculture farms in Florida, located in every region of the state (Figure 1), which produce over **1,500 varieties** of fish, aquatic plants, molluscs, crustaceans, aquatic reptiles and amphibians for ornamental, food and bait markets as well as for sporting, conservation and educational purposes.

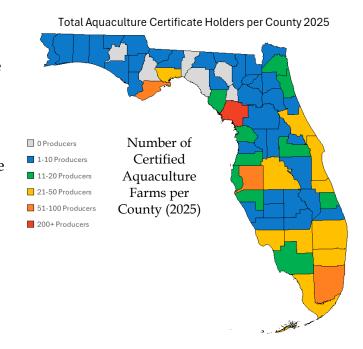


Figure 1. Density of certified aquaculture farms by county (Source: FDACS internal data, 2025).

MAJOR AQUACULTURE COMMODITIES

Below is a production summary report for major aquaculture commodity groups in Florida. The industry data are as reported by the United States Department of Agriculture (USDA) National Agricultural Statistics Service (NASS), including the Florida Field Office/Florida Agricultural Statistics Service. The USDA Census of Agriculture has been conducted every 4-5 years since 1920 (most recently conducted in 2012, 2017 and 2022), and the USDA Census of Aquaculture was conducted in 2013, 2018 and 2023. Additional aquaculture data from 1989-2012 were collected via surveys by the USDA NASS Florida Field Office. All reported sales from voluntary disclosure are farm gate values in real dollars not adjusted for inflation. The data provided in this summary are the most up-to-date and accurate statistics available on Florida's aquaculture industry.

Farm gate sales of Florida aquaculture products (in real dollars) as reported by the USDA totaled approximately **\$68.8 million** in 2012, **\$71.6 million** in 2018 and **165.9 million** in 2023 (USDA 2006, 2013, 2019, 2023; Figure 2). Based on sales data, Florida ranked 4th in the nation for total overall aquaculture value in 2023 (Table 2), rising from 9th place in 2018, and 6th place in 2013.

State	Sales Value (US \$1,000)	# Farms Reporting	Rank
Mississippi	276,950	129	1
Washington	276,890	162	2
Louisiana	195,244	818	3
Florida	165,940	488	4
Alabama	131,906	102	5
California	118,978	79	6
Virginia	104,225	146	7
Arkansas	84,172	55	8
Maine	70,819	113	9
Hawaii	65,189	47	10

Table 1. Top ten 2025 total aquaculture farm gate sales values (in thousands of dollars) as reported in the USDA *Census of Aquaculture* (sales data withheld for confidentiality from GA, NV, NM, ND and WY; Source: USDA 2023).

ALLIGATORS

Alligators are the primary aquatic reptile aquaculture product in Florida. Beginning in St. Augustine at the turn of the 20th century, alligator aquaculture for hides, meat and tourism began to increase in popularity and profitability and continues to be a robust industry today. In 2012, sales from live animals at 7 farms totaled \$1.4 million and sales from eggs, hides and meat at 5 farms totaled \$6.6 million. In 2018, there were 14 total reported operations with sales: 5 operations for hides, 11 for meat and 6 for whole animals. Only meat sales were reported (for farmer confidentiality) in 2018, totaling \$397,000 from 11 operations (Table 2).

AQUATIC PLANTS

Aquatic plants include those grown for water gardens, aquariums, food markets and wetland restoration. In 2012, sales (excluding those for food markets) totaled \$5.3 million from 19 operations. Sales from aquatic plants in Florida peaked in 2001 at \$21.3 million (Table 2), and the industry has been in decline since. Business owners attribute the significant reduction in sales to an overall decline in aquaria hobbyists in the U.S. over the past two decades. In 2018, sales of algae (sea vegetables and microalgae) from 5 operations totaled \$76,000; other aquatic plants were not included in the 2018 *Census of Aquaculture*. In 2023, sales of algae (sea vegetables and microalgae) from 17 operations

SHET MENT OF TO THE SELECTION OF THE SEL

-

¹ Reported from 359 operations with sales in 2005, 404 operations in 2012 and 325 operations in 2018. Based on the total number of operations certified with FDACS in those years, the **average survey response rate was 36%**.

totaled **\$408,000**; other aquatic plants were not included in the 2023 *Census of Aquaculture*.

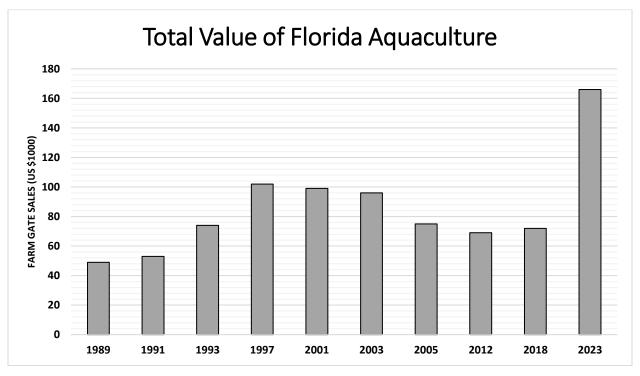


Figure 2. Total farm gate sales value (in thousands of dollars) for all Florida aquaculture commodities, 1989-2023. Based on FDACS internal data, the average survey response rate from operations with sales in 2003 through 2023 was only 39% (Source: Florida Agricultural Statistics Service 1990-2004; USDA 2006, 2013, 2019, 2024).

ORNAMENTALS

The ornamental industry includes marine and freshwater fish, invertebrates, snails, coral and live rock. Florida consistently ranks first in the nation for ornamental fish production—approximately 45% of the total United States ornamental economy—and is the largest sector of Florida's aquaculture industry (Figures 3-4). The total sales from all ornamental commodities, including freshwater and marine fish, coral, live rock, aquarium plants and other marine and freshwater invertebrates totaled \$57.8 million in 2023 (USDA 2023). In 2023 total sales included 161 operations, a 47% increase over 2018. By far the highest value of any state in the nation (Table 3).

Ornamental fish sales in 2018 totaled \$28.7 million from 109 operations and \$27.3 million in 2012 from 101 operations (Table 2). Live rock sales from 4 operations totaled \$44,000 in 2023 and \$373,000 from 12 operations in 2012. Data from 2018 sales were withheld for farmer confidentiality. Florida ranked first in the nation for sales of koi, saltwater ornamental fish and freshwater ornamental fish in 2012, 2018 and 2023 (Table 3).

	Sales Value (US \$1,000)						
	1997	2001	2003	2005	2012	2018	2023
Total	102,000	99,500	95,500	75,000	68,800	71,600	\$165,900
Alligators	3,189	3,253	2,452	4,070	7,995	397	n/a
Aquatic Plants*	13,200	21,320	20,433	17,560	5,327	76	408
Ornamental Fish	57,200	42,424	47,229	33,232	27,269	28,721	57,791
Live Rock	n/a	577	661	341	373	In "Other"	44,000
Clams and Oysters**	13,078	18,264	12,970	10,694	11,889	15,547	42,518
Other Aquaculture***	13,767	3,078	3,875	7,156	12,920	9,752	n/a
Response Rate			47 %	37%	41%	31%	

Table 2. Farm gate sales (in thousands of dollars) annual total and for select Florida aquaculture commodities, 1997-2018. Based on FDACS internal data, the average survey response rate from operations with sales in 2003, 2005, 2012 and 2018 was 39% (Source: Florida Agricultural Statistics Service 1998-2004; USDA 2006, 2013, 2019).

Notes: Aquatic plants for food markets were not reported in 2012; Survey response rate was calculated from the number of total operations with sales reported by FASS/USDA and the number of total operations certified with FDACS (internal data available starting in 2002); Alligator sales in 2018 are meat values only.

- *Aquatic plants, except algae and sea vegetables, are not considered as aquaculture for the 2018 and 2023 census of aquaculture.
- ** Value in 2001 includes clams only; oysters in 2001 were counted as "other aquatics." Clam sales in 2001, 2003 and 2005 were reported to include clam seed.
- *** Value includes catfish, tilapia and minor commodities reported as "other" or "miscellaneous aquaculture." Due to inconsistency in reporting in each census, this value does not include data on other fish, whether used for sport, stocking, conservation, education or food.

FOOD FISH

Food fish species produced in Florida include, but are not limited to, tilapia, catfish, sturgeon, striped bass, cobia, pompano and red drum. In 2012, food fish sales were reported from 95 farms for a total of **\$4.6 million.** Catfish sales were reported from 17 farms for a total of **\$390,000** (a 73% decrease from 2005), 47 farms reported sales of tilapia for a total of **\$1.2 million** (a 157% increase from 2005) and 31 farms reported sales of **\$2.98 million** for other species including bass, sturgeon, carp, cobia, pompano and red drum. Additionally, 13 farms reported shrimp sales of **\$7.5 million** in 2012 (USDA 2013).

In 2018, food fish sales were reported from 46 farms for a total of \$3.96 million (a 14% decrease from 2012). Catfish sales reported from 18 operations (\$302,000) accounted for 8% of total food fish sales and tilapia sales from 17 operations (\$1.5 million) accounted for 39% of total food fish sales. From 2012 to 2018, catfish sales decreased by 23% and tilapia sales increased by 26% in Florida. Striped bass from 5 operations added an additional \$714,000 in sales (18% of total food fish sales).

In 2018 shrimp were produced at 11 farms, but sales data were not reported for farmer confidentiality.

In 2023, food fish sales were reported from 51 farms for a total of \$26.25 million (a 562% increase from 2018). Overall, Florida ranked 7th in the nation for total food fish sales in 2023 (USDA 2023). Catfish sales reported from 7 operations and striped bass sales reported from 6 operations provided a total of \$215,000 in sales, sturgeon sales reported by 6 operations totaling at \$2.01 million in sales. Red drum sales in 2023 were reported from 2 operations and tilapia sales reported from 24 operations, but sales data retained farmer confidentiality.

Commodity	State	(US \$1,000) Sales Value	# Farms Reporting	Rank
Ornamental Fish	Florida	57,791	161	1
(total)	Arkansas	2,119	3	2
	Indiana	1,774	5	3
	Texas	978	10	4
	Ohio	553	26	5
Koi	Florida	1,612	29	1
	Ohio	379	23	2
	New York	282	11	3
	New Jersey	200	7	4
	Louisiana	132	4	5
Saltwater	Florida	16,213	20	1
ornamental fish				
Freshwater	Florida	33,924	94 egg layers/	1
ornamental fish	Tioriua		61 live bearers	
(see table note)	Texas	85	4	2
	Hawaii	20	3	3
	Wisconsin	3	3	4

Table 3. Top five 2023 farm gate sales values (in thousands of dollars) for total and select ornamental fish commodities as reported in the USDA *Census of Aquaculture* (Source: USDA 2023).

Note: Hawaii, Texas and Wisconsin data only include live bearers; Florida data includes a total for both egg layers and live bearers.

SHELLFISH

Hard clams dominate shellfish aquaculture in Florida, with most of the hard clam production occuring in Levy County (Figure 1). Other shellfish produced in the state include oysters and sunray venus clams. There are a scallop farmers in Florida, but their sales data remains confidential and is not included in the farm-gate values. In 2012, sales reported by 139 operations totaled \$11.9 million, with hard clams bringing in \$11.65 million (98% of total sales). In 2018, clams and oysters from 111 operations brought in \$15.5 million in sales, a 31% increase from 2012. Clam sales were reported from 95 operations, totaling \$14.3 million (92% of sales)

while oysters sales were reported from 29 operations, totaling **\$1.25 million**. Florida ranked third in the nation for total clam sales and sixth for sales of oysters in 2018 (USDA 2019).

Hurricanes in 2004 and 2005 negatively impacted Florida's coastal zone, where shellfish are cultured. In addition to large production losses in 2004, 55 clam farmers reported going out of business between 2003 and 2005. Nevertheless, Florida's shellfish industry has seen strong growth. At the end of 2023, there were 854 commercial leases in use (among 336 producers), with 437 (51%) producing hard clams, 197 (23%) producing oysters and 199 (23%) producing both hard clams and oysters (FDACS internal data, 2025).

In 2024 Hurricanes Helene and Milton inflicted significant damage to the shellfish industry causing an estimated **\$46.46 million** and **\$33.21 million** in damage respectfully. Despite two major hurricanes causing millions of dollars in damage the Florida shellfish industry responded with resiliency in 2025 there are over 800 active sovereignty submerged land leases with over 800 producing either oysters or hard clams (FDACS internal data, 2025).

Florida Aquaculture Species in Production 2025

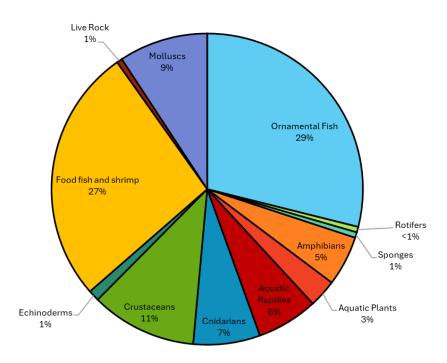


Figure 3. Aquaculture commodities in production in Florida, based on producers certified with the FDACS Division of Aquaculture. The "other" category includes baitfish, sport and stocking fish species, microalgae and other zooplankton species used for feeding purposes (Source: FDACS internal data, 2025).

OTHER COMMODITIES

Other aquaculture commodities include aquatic turtles, frogs, baitfish (e.g., fathead minnows, shiners and novel marine species such as pinfish, killifish and croakers) and recreational sportfish used for stocking (including bass, bluegill, catfish and crappie). Florida's baitfish industry reported 12 farms in 2012, reporting \$41,000 in sales (USDA 2013) Sportfish sales were reported from ten farms for a total of \$97,000 in 2012. Sportfish and baitfish were produced at three and five farms, respectively, but sales data were not reported to retain farmer confidentiality. Frogs and other amphibians were produced at 5 farms in 2023, reporting \$12,000 in sales (USDA 2023).

Aquatic turtles and aquatic turtle products were reported from 28 farms with \$1.2 million in sales in 2012 (USDA 2013). Aquatic turtles were produced at 14 farms in 2018 for a total of \$875,000 in sales (USDA 2019). In 2023, aquatic turtles were produced at 18 farms for a total of \$2.7 million in sales (USDA 2023).

LABOR & METHODS OF PRODUCTION

Florida aquaculture commodities are produced using a variety of methods. Table 4 and Figure 5 show the number of farms that used a particular production method and the number of production units for each method in 2005, 2013, 2018 and 2023 (the years of data available from the USDA *Census of Aquaculture*).

In 2013, 238 operations used 2,003 acres of freshwater and 169 operations used 1,078 acres of saltwater; 61% of operations were less than 3 acres in size. In 2018, 172 operations used 2,541 acres of freshwater and 178 operations used 869 acres of saltwater. In 2023, 235 farms used 2,785 acres of freshwater and 279 farms used 1,605 acres of saltwater. All data is voluntarily reported data and may not reflect actual amounts.

In 2005, 359 farm operators reported a total of 1,055 workers at an average of 31 hours per week. Of these, 158 operations (44%) had 262 unpaid workers (typically partners or family members) and 195 (54%) reported paid workers for a total of **\$12.4 million** in payroll. Of the paid workers, 95 farms reported 478 employed for 150 days or more, and 143 farms had 315 employed for less than 150 days. In 2012, 402 operations reported 765 unpaid workers, 158 operations reported 864 full-time workers and 134 operations reported 322 part-time workers. Labor data was not available for 2018 nor 2023.



Production Method	2005	2013	2018	2023
Ponds	10,437	6,614	6,523	13,030
Raceways (Tanks)	1,037	4,784	3,915	7,995
Recirculating systems (Tanks)	6,781	10,570	11,734	18,165
Flow-through (Tanks)	29,302	11,929	12,098	21,519
Aquaponics (Tanks)	No data	184	126	100
Cages or pens	95	25,297	28,229	40,897
On-bottom molluscs (Acres)	528	550	580	937

Table 4. Number of units for each aquaculture production method as reported in the USDA *Census of Aquaculture* (Source: USDA 2006, 2014, 2019, 2023).

Note: 2005 and 2013 data exclude operations that solely produced and distributed aquaculture products for conservation, recreation, enhancement or restoration purposes.

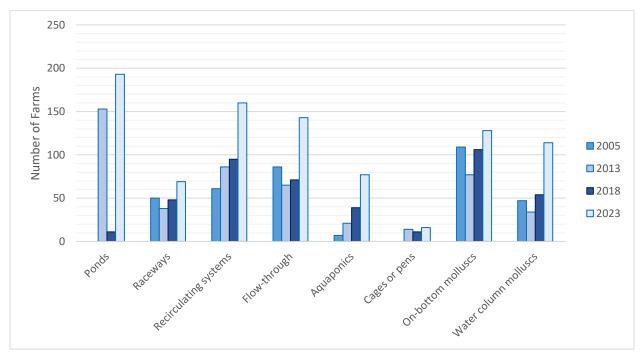


Figure 5. Number of farms in Florida for each aquaculture production method as reported in the USDA *Census of Aquaculture* (Source: USDA 2006, 2014, 2019, 2023). 2005 and 2013 data exclude operations that solely produced and distributed products for conservation, recreation, enhancement or restoration purposes.



DATA SOURCES

Florida Agricultural Statistics Service. May 1990. Florida Agriculture: Aquaculture. Orlando, Florida.

- June 1992. *Florida Agriculture: Aquaculture*. Orlando, Florida.
- June 1994. *Florida Agriculture: Aquaculture*. Orlando, Florida.
- June 1998. *Florida Agriculture: Aquaculture*. Orlando, Florida.
- June 2002. *Florida Agriculture: Aquaculture*. Orlando, Florida.
- June 2004. Florida Agriculture: Aquaculture. Orlando, Florida.
- USDA, National Agricultural Statistics Service. October 2006. *Census of Aquaculture* (2005).
 - NASS.USDA.gov/Surveys/Guide_to_NASS_Surveys/Census_of_Aquaculture/index.php
- September 2014. *Census of Aquaculture* (2013). NASS.USDA.gov/Surveys/Guide_to_NASS_Surveys/Census_of_Aquaculture/index.php
- December 2019. 2018 Census of Aquaculture.

 NASS.USDA.gov/Surveys/Guide to NASS Surveys/Census of Aquaculture/index.php
- USDA, National Agricultural Statistics Service, Florida Field Office. October 2006. *Aquaculture.* In cooperation with the Florida Dept of Agriculture and Consumer Services. NASS.USDA.gov/Statistics_by_State/Florida/Publications/Aquaculture. Maitland, Florida.
- June 2013. *Aquaculture*. In cooperation with the Florida Dept of Agriculture and Consumer Services. <u>NASS.USDA.gov/Statistics_by_State/Florida/Publications/</u> Aquaculture. Maitland, Florida.
- USDA National Agricultural Statistics Service, 2023 Census of Agriculture. Complete data available at www.nass.usda.gov/AgCensus.

DIVISION OF AQUACULTURE CONTACT INFORMATION

Portia Sapp, Director 600 South Calhoun Street, Suite 217 Tallahassee, Florida 32399-1300

Phone: (850) 617-7600

E-mail: Aquaculture_Web@FDACS.gov

Webpage: www.FDACS.gov/Divisions-Offices/Aquaculture

