

Florida's Shellfish Aquaculture

Sustainable farming at its best!

- Improving coastal water quality
- Supplying habitat for fish and marine organisms
- Providing the public with ecosystem services



Florida Department of
Agriculture and Consumer Services

Florida's shellfish industry is growing!

Florida's shellfish aquaculture industry is expanding throughout the state and now includes more than 700 commercial leases among 10 coastal counties. At the end of 2019, there were 719 commercial leases in use among 336 producers, with 56% of leases producing hard clams, 16% producing oysters and 28% producing both hard clams and oysters.¹ The shellfish industry reported farmgate sales of \$15.5 million in 2018, a 31% increase over 2012, with clam sales contributing 92% of that value.² **Florida ranked third in the nation for total clam sales and sixth for sales of oysters in 2018.**²



Oyster farmers working their lease.

In 2012, a total of 543 jobs were supported by the Florida hard clam industry (including employment in various supporting businesses), \$14.7 million in labor income for the jobs created, \$1.4 million in state and local tax revenue, \$2.7 million in federal tax revenue and a **total statewide economic impact of \$38.7 million.**³



Clam farmers harvest bags from lease sites

Advanced aquaculture technologies allow farmers to produce millions of shellfish at inland nurseries, which are then stocked on approved lease sites in bags or hanging baskets and are grown to market size by naturally filter feeding particles and nutrients in the water. This means that farmers don't need to add feed, chemicals, antibiotics or fertilizers into our coastal waters to produce shellfish.

Because shellfish are filter feeders, shellfish farming is considered to be "carbon negative."

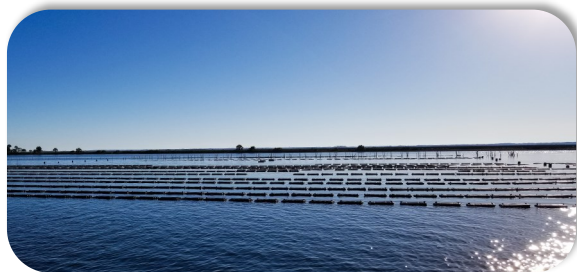


Hanging baskets grow oysters for high-quality half shell markets.



Shellfish farming promotes biodiversity and improves species abundance

Structures used in shellfish aquaculture such as racks, cages, nets, pylons and lines act as artificial reefs and nursery grounds for a variety of other animals, including juvenile fish and crabs that are important to recreational and commercial fishers. Research has shown that species abundance and diversity at shellfish farms is like seagrass habitat and natural oyster reefs, and greater than bare seabeds.⁴



Oysters are farmed at the surface in floating cages or baskets.



Oysters and clams are living water filters!

A single oyster filters over 15 gallons of water per day! Bivalves feed on particles (phytoplankton and microorganisms) and filter nutrients in the water by pumping water over their gills, or “filter feeding.” Filter feeding improves water quality and transfers nutrients to bottom dwelling organisms. Bivalves are an essential link in the food chain for coastal tidal ecosystems.

A single 2.5-acre oyster farm can cycle the nitrogen from 40-50 coastal residents. Florida’s aquacultured clams filter 544 million gallons of seawater per day, removing ~25,000 pounds of nitrogen and ~760,000 pounds of carbon at harvest, a **public benefit valued at \$99,680 annually.**⁵



Florida Department of Agriculture and Consumer Services
Nicole “Nikki” Fried, Commissioner

Division of Aquaculture
600 South Calhoun Street, Ste. 217
Tallahassee, Florida 32399
Contact Us: (850) 617 - 7600
E-mail: Aquaculture_Web@FDACS.gov
www.FDACS.gov

For more information about shellfish aquaculture visit:
Shellfish.IFAS.UFL.edu/

References

¹ FDACS internal data. 2019.

² U.S. Department of Agriculture, National Agricultural Statistics Service. December 2019. *2018 Census of Aquaculture*. www.NASS.USDA.gov/Surveys/Guide_to_NASS_Surveys/Census_of_Aquaculture/index.php

³ Charles Adams, Leslie Sturmer, and Alan Hodges. 2014. *Tracking the Economic Benefits Generated by the Hard Clam Aquaculture Industry in Florida*. University of Florida/IFAS Extension: EDIS. Publication #FE961. EDIS.IFAS.UFL.edu/fe961.

⁴ Dealteris, J. T., Kilpatrick, B.D., and R. B. Rheault. 2004. *A comparative evaluation of the habitat value of shellfish aquaculture gear, submerged aquatic vegetation and non-vegetated seabed*. Journal of Shellfish Research 23:867-874.

⁵ Baker, S., Grogan, K., Larkin, S., and L. Sturmer. 2015. *“Green” Clams: Estimating the value of environmental benefits (ecosystem services) generated by the hard clam aquaculture industry in Florida*. University of Florida: Institute of Food and Agricultural Science, Gainesville, Florida.