



Apalachicola Bay Oyster Aquaculture Economics

Andrew Ropicki
IFAS/Florida Sea Grant
University of Florida

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**Food and
Resource
Economics**



Overview

- Estimated startup costs and income assuming min. required planting density
- Floating bags and floating cages
- Lots of assumptions – Take numbers with a grain of salt!!!



Assumptions

- Plant 70,000 seed per acre (105,000 total) evenly over 6 months
 - Triploid seed, 8-11 mm shell height (\$25.67 per thousand)
- Owner/operator (limited outside labor used and **no owner/operator salary** included in costs)
- **Not included** in startup costs:
 - Boat, motor, trailer, truck
 - Tumbler/pressure washer
 - Lease survey/marketing costs
- 10 months from plant to harvest
- 80% survival and 90% of final oysters are marketable
 - ~72% of what you plant you sell
- Receive \$0.41 per oyster
- Startup costs are self-financed (no loans)
- 10% of capital equipment has to be replaced each year
- Risks not included (hurricanes, red tides, etc.)



Floating Bag Start Up Cost Estimates

	<u>1.5 Acre Lease Site</u>	
	# of Units	Seed Planted Per Year: 105,000
Site Set-Up/Regulatory Costs		
FL Aquaculture Cert.	1	\$ 100.00
Lease Rental Fees	1	\$ 65.19
Total Site Set-Up/Regulatory Costs		\$ 165.19
Seed and Bag Costs		
8-11mm triploid seed	105 (sold by the thousand)	\$ 2,695.00
4, 9, and 14 mm bags	363	\$ 2,087.25
Total Seed and Bag Costs		\$ 4,782.25
Total Float and Tie Costs	(floats, zip ties, id tags, hog rings, pucks and clips, baskets and gloves)	\$ 9,205.72
Total Longline Costs	(rope, screw anchors, buoys, #10 neobraid)	\$ 1,058.00
Total Other 1st Year Costs	(hired labor, fuel, capital replacement, administrative costs)	\$ 2,351.00
<u>TOTAL INITIAL START UP COSTS</u>		<u>\$ 17,562.16</u>

Floating Cage Start Up Cost Estimates

	<u>1.5 Acre Lease Site</u>	
	# of Units	Seed Planted Per Year: 105,000
Site Set-Up/Regulatory Costs		
FL Aquaculture Cert.	1	\$ 100.00
Lease Rental Fees	1	\$ 65.19
Total Site Set-Up/Regulatory Costs		\$ 165.19
Seed and Bag/Cage Costs		
8-11mm triploid seed	105 (sold by the thousand)	\$ 2,695.00
4, 9, and 14 mm bags	363	\$ 2,087.25
Floating Cages	54	\$ 11,880.00
Total Seed and Bag Costs		\$ 16,662.25
Total Float and Tie Costs	(zip ties, id tags, hog rings, baskets and gloves)	\$ 571.20
Total Longline Costs	(rope, screw anchors, buoys)	\$ 650.00
Total Other 1st Year Costs	(hired labor, fuel, capital replacement, administrative costs)	\$ 3,529.00
<u>TOTAL INITIAL START UP COSTS</u>		<u>\$ 21,577.64</u>

Floating Cage Income Statement Estimates

<u>YEAR 1</u>			
<u>Revenue</u>	Oysters Sold	Price/Oyster	Total
Sales Revenue	12,600	\$0.41	\$5,166
<u>Expenses</u>			
Certificate and Lease Rental Fees			\$165
Oyster Seed			\$2,695
Zip Ties			\$100
Hired Labor			\$1,400
Fuel			\$470
Capital Replacement			\$1,509
Administrative			\$150
<u>Total Expenses</u>			\$6,324
<u>Net Income before Taxes</u>			-\$1,158
INCOME PER ACRE:			-\$772
INCOME PER OYSTER:			-\$0.09

<u>YEAR 2</u>			
<u>Revenue</u>	Oysters Sold	Price/Oyster	Total
Sales	75,600	\$0.41	\$30,996
<u>Expenses</u>			
Certificate and Lease Rental Fees			\$165
Oyster Seed			\$2,695
Zip Ties			\$447
Hired Labor			\$2,400
Fuel			\$470
Capital Replacement			\$1,509
Administrative			\$150
<u>Total Expenses</u>			\$7,324
<u>Net Income before Taxes</u>			\$23,672
INCOME PER ACRE:			\$15,781
INCOME PER OYSTER:			\$0.31

Key Takeaways

- You need at least \$17,000 to \$22,000 to get started (even if you have a boat and a truck)
- You are most likely going to lose money in the first year while you wait for your oysters to grow to market size (~10 months)
- At the minimum production level (70,000 planted per acre), profitability depends on effort
 - If it takes 20 hours per week the pay rate is \$22-24/hour
 - If it takes 40 hours per week the pay rate is \$11-12/hour
- Income per oyster looks good (\$0.31-0.33/oyster) but as you increase production you have to hire more labor which will lower these numbers



Contact Info:
Andrew Ropicki
aropicki@ufl.edu
352-294-7667

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