Gulf Coast Off-Bottom Oyster Farming Gear Types

Floating Bags

Floating bags, measuring 33" X 18", are typically made of a Vexar™-type plastic mesh with floats attached to either side. The bags are attached to tandem long-lines. Each run typically holds 200 bags. Grow-out capacity of each floating bag is 150 oysters.

Fouling control is accomplished by flipping the bags over in place. This method only addresses fouling on the bag, not on the oysters as they remain submerged. Other available configurations employ systems where bags are flipped on top of each other ensuring both the oysters and gear receive fouling control. However, this method adds an extra visit to the bag to accomplish a full round of drying.

When used in waters deeper than 8', the hurricane plan for this system is to sink one long-line to the bottom thereby suspending the bags in the water column (subsurface) where they are supported by the other two long-lines.

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For oyster farming info & pictures visit:

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Floating Bags

To get started, you'll need to be able to pay:

- All permit fees
- 100% of gear cost and installation
- First two crops of seed
- Labor for maintenance
- Maintenance equipment costs (i.e. pressure washer, raft)

Budget does not include:

- Permit fees
- Transportation (boat)
- Management costs (i.e. salary)
- Gear installation

Budget assumptions are approximate, subject to change, and will vary depending upon site conditions

Sample Budget & Income for Floating Bag Oyster Farm

ONE RUN	YR 1	YR 2	YR 3	YR 4	TOTAL
Amortized Gear Cost	$1,000	$1,000	$1,000	$1,000	$4,001
# Oysters Stocked	30,000	30,000	30,000	30,000	
# To Market	27,000	27,000	27,000	27,000	
Sale Price (per oyster)	$0.35	$0.35	$0.35	$0.35	
Labor Cost	$708	$708	$708	$708	$2,832
Seed Cost	$1,200	$1,200	$1,200	$1,200	$4,800
Harvest Tag Cost	$34	$34	$34	$34	$135
Maintenance Equipment Cost	$60	$135	$135	$135	$465
GROSS per run	*$9,450*	*$9,450*	*$9,450*	*$9,450*	*$37, 800*
NET per run	*$3,207*	*$3,170*	*$3,170*	*$3,170*	*$12,716*
Gross Margin (%)	67.9	67.1	67.1	67.1	
Production Cost (per oyster)	$0.11	$0.12	$0.12	$0.12	
1-ACRE FARM					
# runs (per acre)	5	5	5	5	
Total expense (per acre)	$14,770	$14,845	$14,845	$14,845	$59,305
Potential annual net income (per acre)	$16,035	$15,850	$15,850	$15,850	$63,585

Pros	Cons
Many configuration options	Materials less durable than other gear types (4 year depreciation vs. 5 years for other gear types)
Due to growing position at water's surface oysters are naturally tumbled	No in-water hurricane plan for sites <8' deep
Many different suppliers for bags	Only fouling on gear is addressed with routine air drying; oysters remain submerged

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Gulf Coast Off-Bottom Oyster Farming Gear Types

Floating Cage System

The floating cage system (FCS), developed in Atlantic Canada, is made of an outer housing and interior shelves made of heavy gauge vinyl-coated wire mesh. Cages may have four or six compartments into which Vexar™ mesh bags, containing oysters, are placed. A door on one side of the housing allows for easy access. At final grow-out density, each bag can hold approximately 150 oysters. Cages are tethered on each end to an anchored long-line. The FCS is supported by two air-filled pontoons. Routinely, the cage is flipped over onto the pontoons (top picture) to allow for control of fouling on both the gear and oysters. OysterGro™ and Go Deep International both manufacture floating cage systems.

The FCS can be shipped flat and assembled on-site. In preparation for hurricanes, this system can be sunk by flooding the pontoons and re-floated after the storm passes.

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Floating Cage System

To get started, you'll need to be able to pay:

- All permit fees
- 100% of gear cost and installation
- First two crops of seed
- Labor for maintenance
- Maintenance equipment costs (i.e. pressure washer, raft)

Budget does not include:

- Permit fees
- Transportation (boat)
- Management costs (i.e. salary)
- Gear installation

Budget assumptions are approximate, subject to change, and will vary depending upon site conditions

Sample Budget & Income for 6-Bag FCS Oyster Farm

ONE RUN	YR 1	YR 2	YR 3	YR 4	YR 5	TOTAL
Amortized Gear Cost	$905	$905	$905	$905	$905	$4,527
# Oysters Stocked	18,000	18,000	18,000	18,000	18,000	90,000
# To Market	16,200	16,200	16,200	16,200	16,200	81,000
Sale Price (per oyster)	$0.35	$0.35	$0.35	$0.35	$0.35	
Labor Cost	$1,415	$1,415	$1,415	$1,415	$1,415	$7,075
Seed Cost	$720	$720	$720	$720	$720	$3,600
Harvest Tag Cost	$20	$20	$20	$20	$20	$101
Maintenance Equipment Cost	$60	$135	$135	$135	$135	$600
GROSS per run	*$5,670*	*$5,670*	*$5,670*	*$5,670*	*$5,670*	*$28,350*
NET per run	*$2,121*	*$2,058*	*$2,058*	*$2,058*	*$2,058*	*$10,355*
Gross Margin (%)	44.9	43.6	43.6	43.6	43.6	
Production Cost (per oyster)	$0.19	$0.20	$0.20	$0.20	$0.20	
1-ACRE FARM						
# of runs (per acre)	5	5	5	5	5	
Total expenses (per acre)	$15,363	$15,438	$15,438	$15,438	$15,438	$77,116
Potential annual net income (per acre)	$10,605	$10,290	$10,290	$10,290	$10,290	$51,765

Pros	Cons
Adaptable to variety of water depths	Fewer runs per acre due to allowance for scope on long-line
Cages are easily transported by floating once in the water	Two people needed to flip cages for routine air drying
Fouling on oysters & baskets addressed with routine desiccation	Reliant on air-filled pontoons which could be punctured
Can be sunk in place in preparation for hurricanes & returned to floating position afterwards	

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Gulf Coast Off-Bottom Oyster Farming Gear Types

Adjustable Long-line System

The adjustable long-line system (ALS), developed in Australia, is made of a tensioned monofilament line strung between pilings with riser posts placed at uniform intervals allowing adjustment of the basket's position in the water column. Lines are installed in tandem (often termed a 'run'). There are at least two manufacturers of ALS equipment: SEAPA and BST, both with US distributors.

Mesh baskets are 28" long with a grow-out capacity of approximately 75 oysters. Baskets can be strung parallel to the line or cross-wise. To control fouling of the baskets and oysters, baskets are routinely (e.g. weekly) lifted out of the water for approximately 24 hours by placing the line on the top riser clip. Baskets are easily handled by people of all abilities and, with regular maintenance, have a life span of approximately 5 years.

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Adjustable Long-line System

To get started, you'll need to be able to pay:

- All permit fees
- 100% of gear cost and installation
- First two crops of seed
- Labor for maintenance
- Maintenance equipment costs (i.e. pressure washer, raft)

Budget does not include:

- Permit fees
- Transportation (boat)
- Management costs (i.e. salary)
- Gear installation

Budget assumptions are approximate, subject to change, and will vary depending upon site conditions

Sample Budget & Income for ALS Oyster Farm

ONE RUN	YR 1	YR 2	YR 3	YR 4	YR 5	TOTAL
Amortized Gear Cost	$957	$957	$957	$957	$957	$4,781
# Oysters Stocked	15,000	15,000	15,000	15,000	15,000	75,000
# To Market	13,500	13,500	13,500	13,500	13,500	67,500
Sale Price (per oyster)	$0.35	$0.35	$0.35	$0.35	$0.35	
Labor Cost	$1,415	$1,415	$1,415	$1,415	$1,415	$7,075
Seed Cost	$600	$600	$600	$600	$600	$2,250
Harvest Tag Cost	$17	$17	$17	$17	$17	$85
Maintenance Equipment Cost	$60	$135	$135	$135	$135	$600
GROSS per run	*$4,725*	*$4,725*	*$4,725*	*$4,725*	*$4,725*	*$23,625*
NET per run	*$1,676*	*$1,601*	*$1,601*	*$1,601*	*$1,601*	*$8,081*
Gross Margin (%)	35.5	33.9	33.9	33.9	33.9	
Production Cost (per oyster)	$0.23	$0.23	$0.23	$0.23	$0.23	
1-ACRE FARM						
# of runs (per acre)	8	8	8	8	8	
Total expense (per acre)	$23,970	$24,045	$24,045	$24,045	$24,045	$120,152
Potential annual net income (per acre)	$13,409	$12,809	$12,809	$12,809	$12,809	$64,648

Pros	Cons
Easy handling and inventory control	Limited to shallow water (≤6 ft)
Ability to adjust growing position throughout the water column	Pilings and pipes in the water that extend above the water line
Oysters get naturally tumbled with baskets in in-line configuration	Heavy equipment needed for installing pilings
Fouling on oysters and baskets addressed with routine air-drying	Gear installation more labor intensive than other gear types
Automated grading and loading equipment available	

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Gulf Coast Off-Bottom Oyster Farming Gear Types

Bottom Cages

Bottom cages measure 48" X 36" X 16" and are held off the substrate by two heavy gauge vinyl-coated wire mesh legs spanning the cage's width. Each cage has two 5" deep levels made of vinyl-coated wire mesh with a frame affixed to the top edge (like a picture frame). The frame supports a flat piece of mesh which serves as the top level's lid. Cages are tethered to a long-line and their position marked with a small marker buoy. LowPro™ is a popular manufacturer of bottom cages.

Cages can be made of various mesh sizes. Some growers opt to own several cages with gradually bigger mesh; others will use a 2"X2" mesh cage as a housing for smaller mesh until oysters reach grow-out size.

Because these cages rest on the bottom, the oysters are close to bottom-dwelling predators (i.e. oyster drills). Mechanized lifting equipment (i.e. a davit) is needed to lift the cage off the bottom. Fouling can be controlled on these cages by pressure washing.

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Bottom Cages

To get started, you'll need to be able to pay:

- All permit fees
- 100% of gear cost and installation
- First two crops of seed
- Labor for maintenance
- Maintenance equipment costs (i.e. pressure washer, raft)

Budget does not include:

- Permit fees
- Transportation (boat)
- Management costs (i.e. salary)
- Gear installation

Budget assumptions are approximate, subject to change, and will vary depending upon site conditions

Sample Budget & Income for Bottom Cage Oyster Farm

ONE RUN	YR 1	YR 2	YR 3	YR 4	YR 5	TOTAL
Amortized Gear Cost	$1,385	$1,385	$1,385	$1,385	$1,385	$6,924
# Oysters Stocked	24,000	24,000	24,000	24,000	24,000	
# To Market	12,000	12,000	12,000	12,000	12,000	
Sale Price (per oyster)	$0.35	$0.35	$0.35	$0.35	$0.35	
Labor Cost	$1,300	$1,300	$1,300	$1,300	$1,300	$6,500
Seed Cost	$960	$960	$960	$960	$960	$4,800
Harvest Tag Cost	$27	$27	$27	$27	$27	$135
Maintenance Equipment Cost	$295	$295	$295	$295	$295	$1,475
GROSS per run	*$4,200*	*$4,200*	*$4,200*	*$4,200*	*$4,200*	*$21,000*
NET per run	*$278*	*$278*	*$278*	*$278*	*$278*	*$1,388*
Gross Margin (%)	5.88	5.88	5.88	5.88	5.88	
Production Cost (per oyster)	$0.33	$0.33	$0.33	$0.33	$0.33	
1-ACRE FARM						
# of runs (per acre)	8	8	8	8	8	
Total expense (per acre)	$29,574	$29,574	$29,574	$29,574	$29,574	$147,870
Potential Annual Net Income (per acre)	$2,221	$2,221	$2,221	$2,221	$2,221	$11,106

Pros	Cons
On-bottom cage concept (i.e. crab pot) familiar to local residents	Davit necessary for lifting cages out of the water
Only a small marker buoy on the water's surface	No frequent air-drying method
	Pressure washing of cage is the only way to control fouling
	Cages close to bottom-dwelling predators (i.e. oyster drills)

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