Developing a Plan to Get into the Game and Basic Shellfish Culture Methods

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Business planning

- Aquaculture, and especially shellfish aquaculture, is new to financial folks
- Even if you have all the money to front your operation it will be beneficial to develop a sound business plan
- A sound business plan will allow you to see it there is potential for the business before going all out – go big or go home works about the same in Vegas as it does with aquaculture
- It is very important to not only consider costs of production but to establish your market – before you start producing





Standard Business Plan Format

I. Executive Summary

II. Business Description (Mission statement, contact info, experience, description of products, location, distribution to market, advantages over competitors, short and long term goals)
III. Products and/or Services

IV. Production (*Methods used, equipment required, quality control and inventory methods*)

V. Market Analysis (Competition, targeted customers, seasonality, trends)

VI. Personnel and Management (*Responsibilities and duties, support*)

VII. Financial Information (Projected expenses and income – budget development)





North Carolina Small Business Center Network https://www.ncsbc.net/





CREATING OWNERSHIP AND ECONOMIC OPPORTUNITY

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There are 3 phases of shellfish aquaculture

✓ Hatchery✓ Nursery✓ Growout





In NC most growers buy advanced seed and bypass the hatchery and initial nursery phases

Hatchery phase

Broodstock spawning



Veliger stage

Source of the second sec

Larval tanks

Algae culture



Setting



"eyed" pediveliger larvae ready to set

1.5 million late stage oyster larvae



Setting = free swimming to sedentary life
Clam larvae don't require substrate
Oyster larvae can be set on shell/other substrate for clump oysters
OR set on microcultch for single seed





Nursery phase

 Clam spat and single spat oysters raised using land based or floating upweller systems
When of appropriate size, seed are ready for planting/stocking

✓ Spat on shell/substrate oysters planted about a week after setting



Oyster seed ready

for growout phase



(from Frankish 1991)

Land based upwellers





Floating upweller system (FLUPSY)





Need further nursing in upwellers

Ready to stock



Size matters.....

	Oyster Seed Prices (Triploid)	
i	1/4'' Seed (6.4 mm)	\$25/1,000
	3/8'' Seed (9.5 mm)	\$30/1,000
	1/2" Seed (12.7 mm)	\$35/1,000





Growout phase - clams

Seed stocked into mesh bags on bottom or directly on bottom and covered with protective netting, mesh 3/8 " to 1/2"
Pressure wash to control fouling
About two years required to produce 2" market clam





Oyster growout phase: bottom culture

- Spat on shell/substrate stocked directly on bottom
- ✓ One to two year to market
- ✓ Harvested by dredging for shucked market







Finished product

Oyster growout phase: off bottom culture

Allows production of single oysters for half shell market
Seed stocked into various off bottom, floating, or suspended gear types, culled, graded, and split regularly to adjust density
Harvest at one to two years





Longline culture system

Grading oysters



Cage at harvest



Marketed product



Sorting, culling, splitting cleaning.....









