

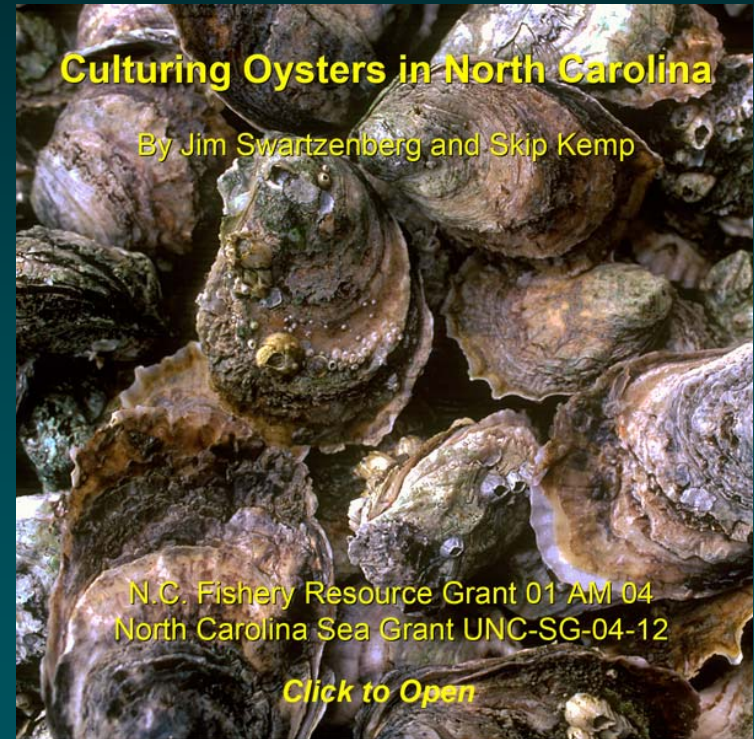
NC Shellfish Mariculture

2010 NC Aquaculture Development Conference

Marc Turano, Ph.D.

NC Sea Grant
Mariculture & Blue Crab
Specialist

marc_turano@ncsu.edu



NC Mariculture Industry

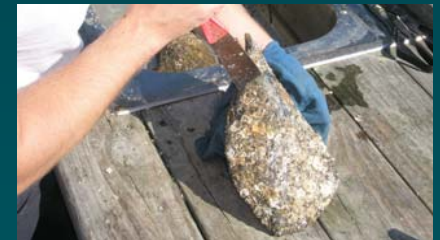
- Species

- Commercial production

- Hard clam
 - *M. mercenaria*
 - Eastern Oyster
 - *C. virginica*

- Research

- Bay Scallop
 - *Argopectin irradianis*
 - Pen shell
 - *Atrina sp.*



NC shellfish mariculture- statistics

- July, 2008- July, 2009
- 237 leaseholders
 - 1844 acres planted
- Clams
 - Bushels produced: 4,175
 - Value: \$264,839
- Oysters
 - Bushels produced: 5,011
 - Value: \$115,944



NC shellfish mariculture- Clams

- 1 hatchery
 - Produced 4 million clams in 2009
- 1 Nursery ?
 - Likely several small-scale
- Majority are growout operations



NC shellfish mariculture- Oysters

- **Extensive culture**
 - Cultch planting
 - Relies on natural recruitment
 - Relay participants
 - Stock private leases with shellfish from prohibited/polluted waters



NC shellfish mariculture- Oysters

- Intensive culture
 - Growth from larvae/ seed oysters
 - Larvae- Remote setting
 - Micro-cultch- individuals
 - Cultch- clusters
 - Seed stock- nursery/grow-out culture



NC shellfish mariculture- Oysters

- 1 hatchery
- 2+ remote setting operation?
- 2 intensive production facilities
- Majority
 - Oyster relay
 - Cultch planting



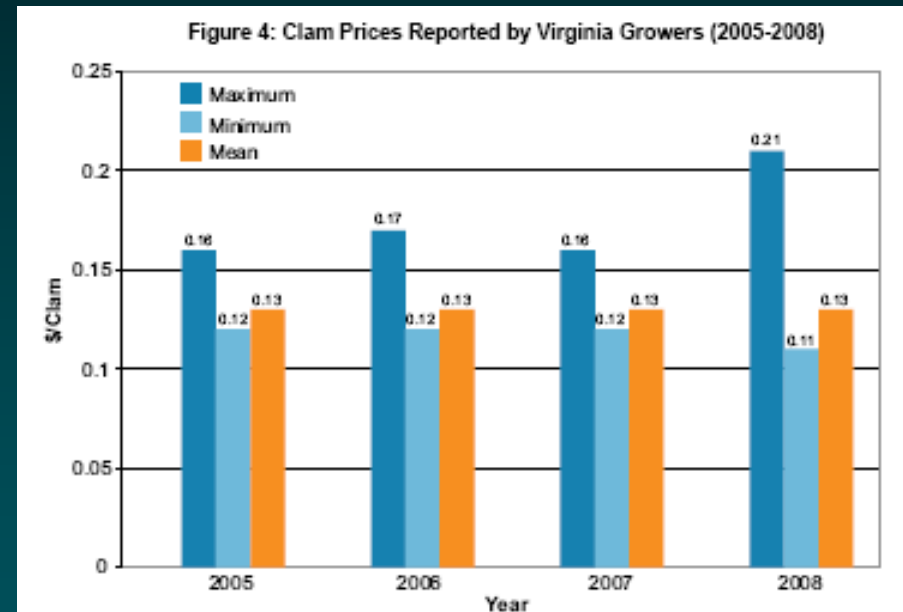
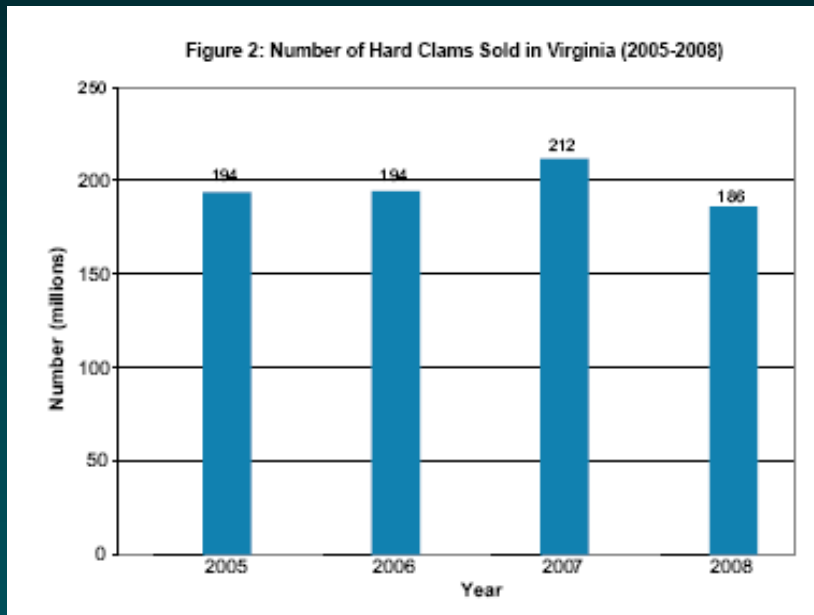
Getting involved- shellfish mariculture

- Purchasing existing leases
 - Lease history
 - Price
 - Determines profits
 - Potential for future closures
 - Adjacent development
 - File appropriate paperwork with DMF
- Obtaining a new lease
 - Site selection
 - Areas surrounded by or adjacent to shellfish beds
 - < 10 bushels/ acre
 - 100' from developed shoreline
 - Free evaluation (DMF)
 - File application with DMF
 - Formal investigation
 - Public comment
 - Survey upon approval

Water column leases require an additional amendment

Shellfish mariculture- In context

- Neighbors to the North



Shellfish Mariculture- In Context

- Neighbors to the North

Figure 7: Number of Aquacultured Market Oysters Sold by Virginia Growers (2005-2008)

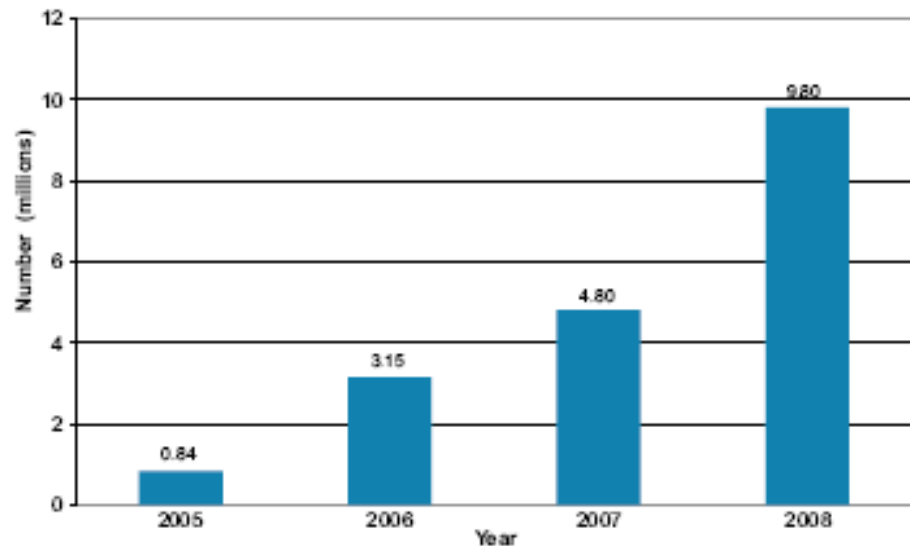
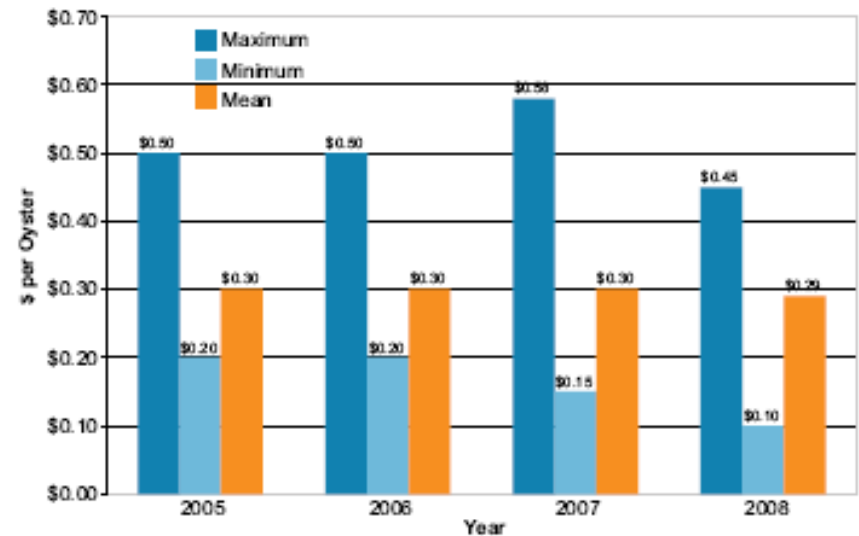


Figure 8: Reported Market Prices for Virginia Aquacultures Oysters (2005-2008)



NC Shellfish Mariculture

- Small industry, continued interest
- Potential for future development- diversifying commercial fishing
- Issues
 - Leasing process
 - Lease moratoriums
 - Technological improvements
 - Water quality/ closed areas
- Evaluation
 - Current industry- need for data
 - Gauge future interests for growth