

**Market Opportunities  
For  
Shellfish Aquaculture**

**Shellfish Aquaculture  
Conference  
Anchorage, Alaska  
December 3, 2004**

Howard M. Johnson  
H.M. Johnson & Associates




---

---

---

---

---

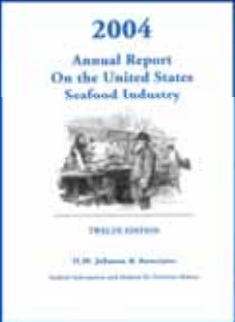
---

---

---

**Howard M. Johnson**

- Howard@hmj.com
- www.hmj.com
- www.fishjobs.com
- 30+ years in the seafood industry
- 15+ years in seafood consulting and market research




---

---

---

---

---

---

---

---

**Shellfish Marketing Agenda**  
*The view from 30,000 feet*

- World seafood supply demand trends
  - Forecast world demand
  - Japan
  - China
  - Europe
  - United States
- World cultured shellfish production
- U.S. shellfish culture issues/opportunities
- Marketing opportunities for Alaska




---

---

---

---

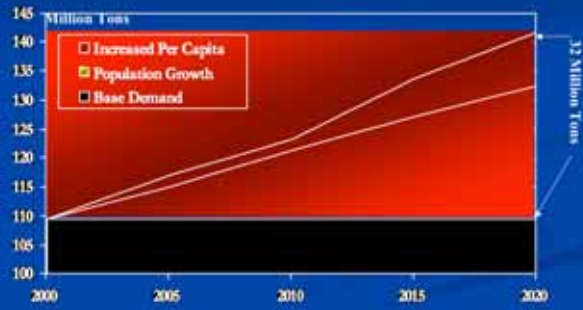
---

---

---

---

## Forecast World Seafood Demand



Source: Int'l Food Policy Research Inst.

---

---

---

---

---

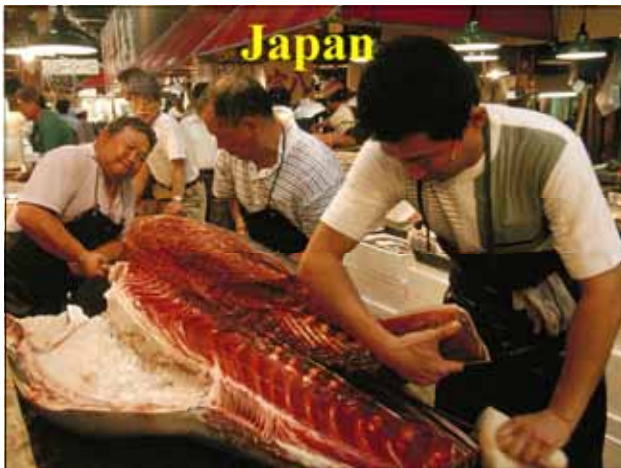
---

---

---

---

---




---

---

---

---

---

---

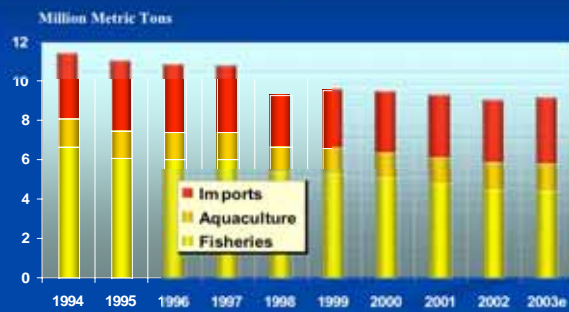
---

---

---

---

## Japanese Seafood Supply *Trending Lower*




---

---

---

---

---

---

---

---

---

---

## Japan: Supply/Demand Trends

- Japanese population approaching zero growth will then shrink
- Per capita seafood consumption declining
- Household seafood spending declining
- Still a major shellfish importer
  - 18,770 MT of clams in 2003
  - 8,192 MT of oysters

---

---

---

---

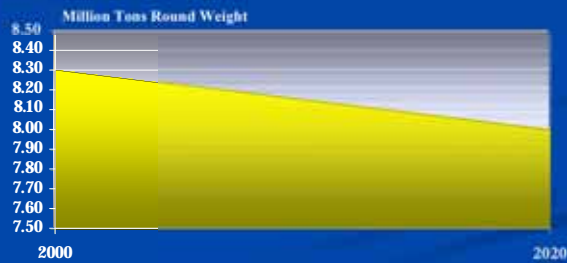
---

---

---

---

## Japan 2020 A Shrinking Market



---

---

---

---

---

---

---

---

## China



---

---

---

---

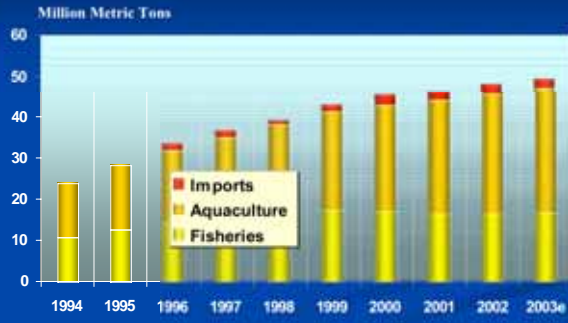
---

---

---

---

## China Seafood Supply




---

---

---

---

---

---

---

---

---

---

---

---

## China 2020 Strong Future Demand



Source: International Food Policy Research Institute

---

---

---

---

---

---

---

---

---

---

---

---

## China's urban households consume less staple food and more poultry, seafood, oils and dairy products

Food Item	1990	2001
Pound Per Capita		
Grain	289	176
Vegetables	306	256
Red Meat	49	42
Poultry and Eggs	24	35
<b>Fish and Shrimp</b>	<b>18</b>	<b>22</b>
Vegetable Oil	13	18
Dairy Products	11	26
Number		
Refrigerators owned per 100 households	29	82

Source: China Statistical Yearbook

---

---

---

---

---

---

---

---

---

---

---

---

**China's rural households still rely on staples**

Food Item	Rural Residents	Urban Residents
Pounds Per Capita (2001)		
Grain	324	176
Vegetables	240	256
Red Meat	32	42
Poultry and Eggs	17	35
<b>Fish and Shrimp</b>	<b>8</b>	<b>22</b>
Vegetable Oil	12	18
Dairy Products	3	26
Number (2001)		
Refrigerators owned per 100 households	14	82

Source: China Statistical Yearbook

---

---

---

---

---

---

---

---

---

---

---

---

**China: Supply Trends**

- “Zero growth” policy for coastal fishing
- Aquaculture production will continue to increase sharply, primarily in fresh fish species
- China will need to import more seafood to sustain demand
- Entry into WTO will end tariffs by 2007

---

---

---

---

---

---

---

---

---

---

---

---

**China: Demand Trends**

- Urban consumer market increasing
- Growth (and consolidation) of retail
- Growth in middle class (with disposable income)
- Demand for upscale seafoods
  - Shrimp
  - Lobster
  - Live fish

---

---

---

---

---

---

---

---

---

---

---

---




---



---



---



---



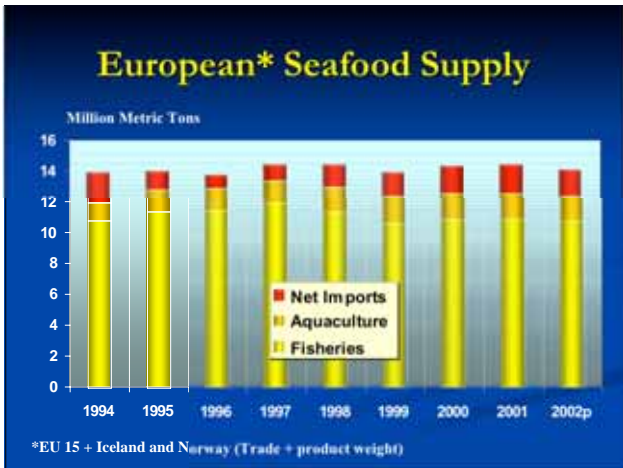
---



---



---




---



---



---



---



---



---



---




---



---



---



---



---



---



---



## World Shellfish Culture



---

---

---

---

---

---

---

---

## World Cultured Oyster Production

Metric Tons Live Weight



Source: FAO FishStat

---

---

---

---

---

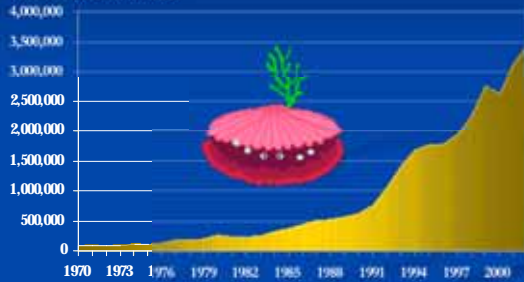
---

---

---

## World Cultured Clam Production

Metric Tons Live Weight



Source: FAO FishStat

---

---

---

---

---

---

---

---

## World Cultured Mussel Production

Metric Tons Live Weight



Source: FAO FishStat

---

---

---

---

---

---

---

---

---

---

## World Cultured Scallop Production

Metric Tons



Source: FAO FishStat

---

---

---

---

---

---

---

---

---

---

## U.S. Shellfish Market



---

---

---

---

---

---

---

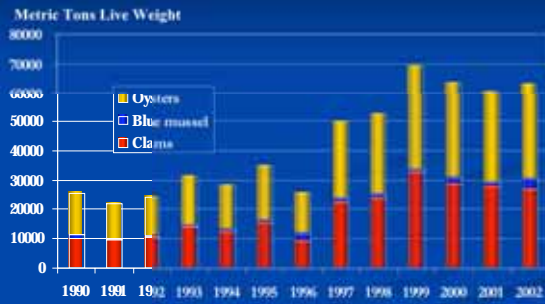
---

---

---



## U.S. Cultured Shellfish Production



Source: FAO

---

---

---

---

---

---

---

---

## U.S. Molluscan Aquaculture Strengths

- Farmed mollusks are “ocean friendly”

---

---

---

---

---

---

---

---

## Farmed Mollusks Rate High with Environmental Groups

- Blue Ocean Institute – “Farmed clams, mussels, oysters and bay scallops...top choice.”
- Monterey Bay Aquarium – “Farmed clams, oysters and mussels...best choice.”
- Environmental Defense – “Farmed abalone, clams, mussels and oysters...best choices.”

---

---

---

---

---

---

---

---

## U.S. Molluscan Aquaculture Strengths

- Farmed mollusks are “ocean friendly”
- Mollusks have good nutritional profiles
- Mollusk prices are generally stable

---

---

---

---

---

---

---

## U.S. Molluscan Aquaculture Weaknesses

- 🐞 Negative publicity regarding toxins
- 🐞 Strong reliance on ethnic markets
- 🐞 Some growing areas “anti-aquaculture” or polluted
- 🐞 Some products not “consumer friendly”
- 🐞 Production data not readily available

---

---

---

---

---

---

---

## U.S. Molluscan Aquaculture Opportunities

- 🐞 U.S. Seafood market is growing

---

---

---

---

---

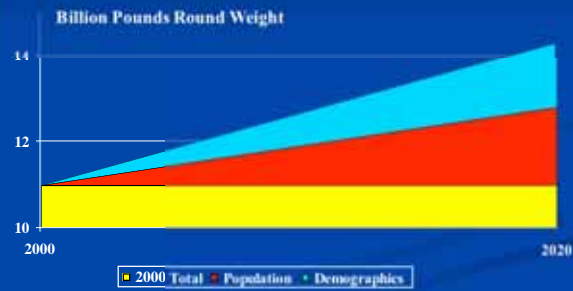
---

---



## Future U.S. Seafood Demand

Population growth and changing demographics alone will require an additional 3.3 billion pounds (round wt.) by 2020. Greater supply and low prices could push demand even higher




---

---

---

---

---

---

---

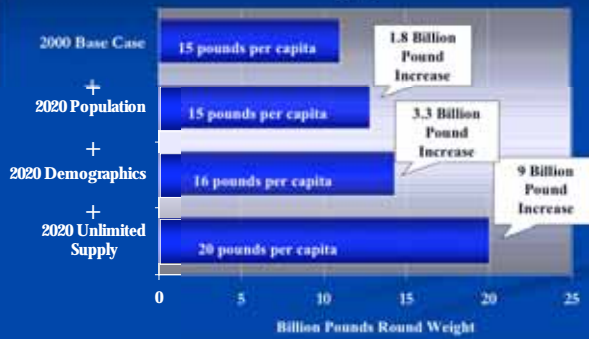
---

---

---

## U.S. Seafood Demand in 2020

How much more supply needed?




---

---

---

---

---

---

---

---

---

---

## U.S. Molluscan Aquaculture Opportunities

🦪 U.S. Seafood market is growing

🦪 Away-from-home seafood growth will outpace other proteins

---

---

---

---

---

---

---

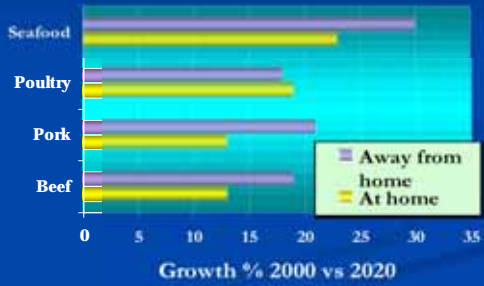
---

---

---

## Future U.S. Seafood Demand

*Growth in both Retail and Foodservice*



Source: USDA ERS

---

---

---

---

---

---

---

---

---

---

## U.S. Molluscan Aquaculture Opportunities

- 🦪 U.S. Seafood market is growing
- 🦪 Away-from-home seafood growth will outpace other proteins
- 🦪 Good export markets

---

---

---

---

---

---

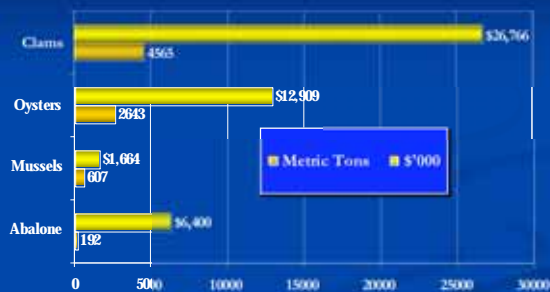
---

---

---

---

## U.S. Mollusk Exports 2003




---

---

---

---

---

---

---

---

---

---

## U.S. Molluscan Aquaculture Opportunities

- 🍷 U.S. Seafood market is growing
- 🍷 Away-from-home seafood growth will outpace other proteins
- 🍷 Good export markets
- 🍷 Processing/packaging technology will provide added safety

---

---

---

---

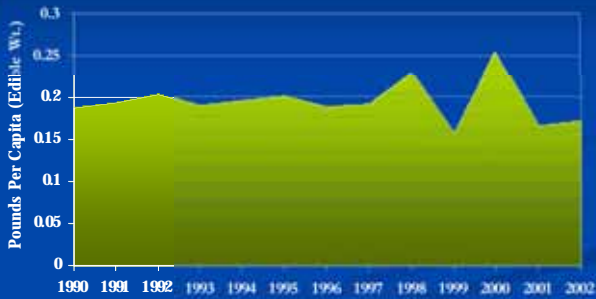
---

---

---

---

## U.S. Oyster Consumption



---

---

---

---

---

---

---

---

## U.S. Oyster Market

- Reported U.S. per capita consumption .20 lbs
- 2002 ex-farm value of \$53.5 million
- Consumption likely under-reported
- 15% of consumers eat 85% of total\*
- Average consumer 18-49 male in coastal area\*
- 10% drop in price raised demand by 25%\*

\*University of Florida consumer survey 2001

---

---

---

---

---

---

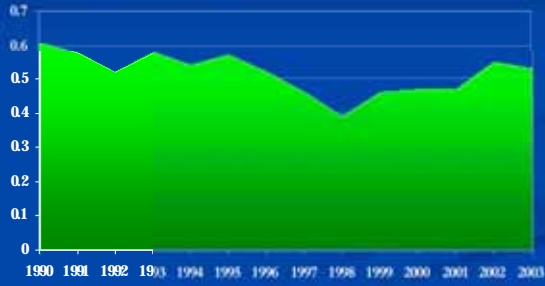
---

---



## U.S. Clam Consumption

Pounds Per Capita (Edible Weight)



---

---

---

---

---

---

---

---

## U.S. Clam Market

- Total U.S. consumption of 156 million pounds (edible weight) in 2003
- **2002 reported** cultured production of 10 million pounds (meat weight)
- **Reported** ex-farm value of \$10 million
- **Cultured** geoduck a high-value export

---

---

---

---

---

---

---

---

## U.S. Scallop Consumption

Pounds Per Capita - Edible Wt.



Source: NMFS

---

---

---

---

---

---

---

---

## Some Fearless Forecasts for Shellfish Growers

- Demand for oysters, mussels, clams and scallops will grow
- Technology applied to shellfish safety will mitigate trade/consumer fears
- Retail products will need to be case ready
- Central processing facilities need to achieve economies of scale
  - Contract growers
  - Co-op processing/marketing

---

---

---

---

---

---

---

---

## Conclusions

- Strong demand for seafood in general should help mollusks
- Mollusks are undermarketed
- Need new trial among younger population
- Niche markets, niche products (value-added) needed

---

---

---

---

---

---

---

---

## Alaska Shellfish Aquaculture Advantages/Opportunities

- Greater siting opportunities than lower 48
  - Unpolluted
  - Fewer "view" issues
- Utilization of processing infrastructure
- Sales synergy with established companies
- Capitalize on "Alaska" and local branding

---

---

---

---

---

---

---

---

## Alaska Shellfish Aquaculture Advantages/Opportunities

- Development of contract growing, co-op or integrated models
- Small-scale "family" businesses
- Become world leader in red crab culture
- Proximity to Asia via air cargo

---

---

---

---

---

---

---

---

## Alaska Shellfish Marketing Opportunities

- Local markets
- National markets
- Niche markets
- Export markets
- Take market share from Canada

### Welcome



Family owned and operated, Rappahannock River Oysters™ has been farming oysters in the beautiful middle-reaches of the Rappahannock River for over a century. Tap the same family, the same river, and the time-honored Chesapeake Bay oyster.

A healthy, robust seafood enterprise, RRO™ combines the latest innovations in oyster culture with great old-fashioned customer service and care. Explore our website, learn a little about how and where we grow our oysters, and then give us a try! You'll be asking the oyster eaters by name... Rappahannock River oysters.

---

---

---

---

---

---

---

---

## OYSTER MENU

BAR RESTAURANT      SATURDAY, NOVEMBER 27<sup>th</sup>, 2014

<b>APPETIZERS</b> OYSTERS ON THE HALF SHELL OYSTERS STEAMER OYSTERS WITH GARLIC BUTTER OYSTERS WITH TOMATO SAUCE OYSTERS WITH LEMON BUTTER OYSTERS WITH CRAB CAKES OYSTERS WITH CRAB CAKES OYSTERS WITH CRAB CAKES	<b>RAW BAR</b> RAW OYSTERS RAW CRAB CAKES RAW CRAB CAKES RAW CRAB CAKES RAW CRAB CAKES RAW CRAB CAKES RAW CRAB CAKES RAW CRAB CAKES	<b>TODAY'S CATCH</b> TODAY'S CATCH TODAY'S CATCH TODAY'S CATCH TODAY'S CATCH TODAY'S CATCH TODAY'S CATCH TODAY'S CATCH TODAY'S CATCH
<b>SOUPS</b> SOUPS SOUPS SOUPS SOUPS SOUPS SOUPS SOUPS SOUPS	<b>SEALED PLATTERS</b> SEALED PLATTERS SEALED PLATTERS SEALED PLATTERS SEALED PLATTERS SEALED PLATTERS SEALED PLATTERS SEALED PLATTERS SEALED PLATTERS	<b>MAIN SIGNS</b> MAIN SIGNS MAIN SIGNS MAIN SIGNS MAIN SIGNS MAIN SIGNS MAIN SIGNS MAIN SIGNS MAIN SIGNS
<b>COLD BUFFET</b> COLD BUFFET COLD BUFFET COLD BUFFET COLD BUFFET COLD BUFFET COLD BUFFET COLD BUFFET COLD BUFFET	<b>SHRIMP AND CRAB</b> SHRIMP AND CRAB SHRIMP AND CRAB SHRIMP AND CRAB SHRIMP AND CRAB SHRIMP AND CRAB SHRIMP AND CRAB SHRIMP AND CRAB SHRIMP AND CRAB	<b>STEW AND PANCAKES</b> STEW AND PANCAKES STEW AND PANCAKES STEW AND PANCAKES STEW AND PANCAKES STEW AND PANCAKES STEW AND PANCAKES STEW AND PANCAKES STEW AND PANCAKES

---

---

---

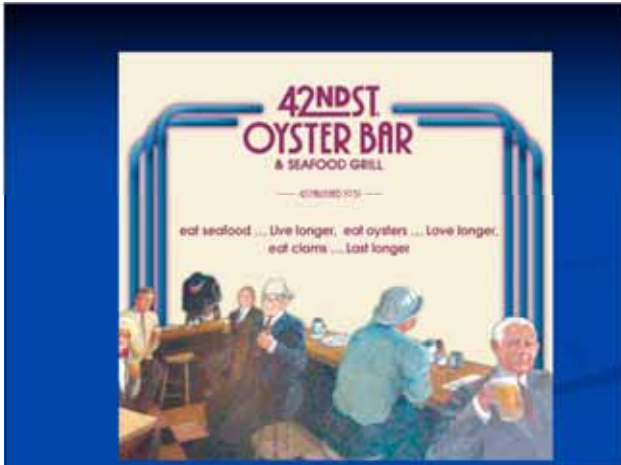
---

---

---

---

---



---

---

---

---

---

---

---

---

### Market Studies on the Net

- New Brunswick Oyster Aquaculture Industry Market Study [www.acoa.ca/e/library/reports/Shellfish/shellfish.pdf](http://www.acoa.ca/e/library/reports/Shellfish/shellfish.pdf)
- Marketing Opportunities for Pacific Oysters – PCSCA Study [www.ams.usda.gov/stsd/FSMIP/FY2000/WA0300.pdf](http://www.ams.usda.gov/stsd/FSMIP/FY2000/WA0300.pdf)
- Clams Market Research Focus Group Report [www.fl-seafood.com/industry/reports/clams\\_rep9-16.pdf](http://www.fl-seafood.com/industry/reports/clams_rep9-16.pdf)

---

---

---

---

---

---

---

---

## Thank you

---

---

---

---

---

---

---

---