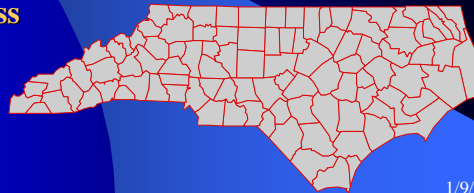


# NORTH CAROLINA AQUACULTURE UPDATE 2006

**Thomas M. Losordo, Professor**  
**Dept. of Biological and Agricultural Engineering**  
**North Carolina State University**

**Matt Parker** NCDA & CS

**Jeff Hinshaw, Steve Gabel, Mike Frinsko,**  
**Skip Thompson and Molly Sandfoss**  
**NC Cooperative Extension**  
**Debra Sloan, NCDA&CS**



1/9/2008

## Thank you to all of the farms that provided the data to us for this presentation!

This presentation will be posted  
online at: [www.ncaquaculture.org](http://www.ncaquaculture.org)  
after the conference.



Mike Frinsko and Joe Thompson 1/9/2008

Freshwater

- Trout (84)
- Catfish (38)
- Striped Bass (19)
- Tilapia (10)
- Freshwater Prawns (8)
- Crawfish (4)
- Yellow Perch (2)
- Sturgeon (1)
- Eels (1)
- Ornamentals (1)

# 2006 NORTH CAROLINA AQUACULTURE SPECIES



Dr. Wade Watanabe & Chris Woolrich, UNCW at teaching at an NC State Flounder Workshop

Saltwater

- Clams & Oysters (196 leases)
- Soft Shell Crabs (338 shedders)
- Southern Flounder (1)
- Black Sea Bass (research)

1/9/2008

# NORTH CAROLINA AQUACULTURE BY REGION

Cool and Coldwater  
Flow-Through  
Tank Production

Water Limited  
Recirculating Tank  
Production

Warmwater  
Pond Production



1/9/2008

## 2006 NORTH CAROLINA TROUT INDUSTRY STATUS

42 Food Fish Producers (+1)

4.527 Million Pounds (+4.1 m)

@ \$1.42 / Pound



Farm Gate Value = \$6,428,800

1/9/2008

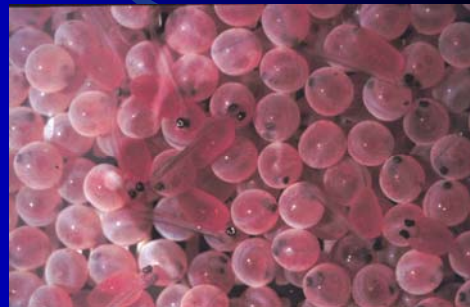
## 2006 NORTH CAROLINA TROUT INDUSTRY STATUS

17 Hatcheries (+1)

9,529,000 Fingerlings

Produced

@ \$0.09 each





“Eyed” Trout Eggs

Farm Gate Value = \$838,700 ↑

1/9/2008

# 2006 NORTH CAROLINA TROUT INDUSTRY

25 Fee Fishing (-5)  
Operations

304,500 Pounds   
@ \$3.35 / Pound 

Farm Gate Value = \$1,020,500



**MORGAN MILL TROUT FISHING RESORTS**  
"SINCE 1983"

<b>RULES</b>	<b>ADMISSION</b>
• HAVE FUN	\$1 PER PERSON GROUP RATES \$5.00
• BE CAREFUL! WE ARE NOT RESPONSIBLE FOR ACCIDENTS	<b>INCLUDES</b>
• DO NOT THROW ANY FISH BACK	POLES & BAIT FISH CLEANED & ICED DOWN FREE
• COME BACK TO SEE US!	FILLETING AVAILABLE PICNIC AREA RESTROOMS

**Please Pay Admission Before Fishing**

**RAINBOW TROUT**  
\$2.95 lb. FISH OUT OR DIP OUT  
TO CATCH FISH FASTER  
USE WORMS \$2.25

THANK YOU  
**OWEN FAMILY**  
*Open Year Round*  
Mon - Sat 8 Til 6 Sun Til 6  
Closed Weekends Dec 1 Thru Mar 1

1/9/2008

# 2006 NORTH CAROLINA TROUT INDUSTRY STATUS

4 Processors

2,100,000 lbs  
(processed product)  
Average Price  
of Products  
= \$4.29 / pound



Value Added Trout Products

Value = \$9,015,000

1/9/2008

# 2006 NORTH CAROLINA TROUT INDUSTRY IMPACT

Farm Gate and  
Processed Product  
Value = \$17,303,000

Economic Impact

(based on a 5:1 multiplier)

\$86,515,000



1/9/2008

# 2006 NORTH CAROLINA CATFISH INDUSTRY STATUS

38 Food Fish Producers (- 7)

2,366 Pond Acres (- 63)

9,888,000 Pounds

(9.75 in '05; 10.0 in '04; 9.3 in 2003; 7.3 in 2002)

average price \$0.80 / Pound ↑ (+\$0.07)

highest in 20 years in NC

up from \$0.73 last year average

Farm Gate Value = \$7,910,400

↑ (\$792,000)



Harvesting Catfish

1/9/2008

## 2006 NORTH CAROLINA CATFISH INDUSTRY STATUS

1 Fingerling Producer  
4,000,000 fingerlings

Farm Gate Value  
= \$360,000



Catfish FINGER-lings

1/9/2008

## 2006 NORTH CAROLINA CATFISH SALES & PROCESSING

1 Processor

Processed Value=  
\$13,700,000



## 2006 NORTH CAROLINA FEEDS PRODUCTION

### 1 Mill

Producing 26.1 million  
pounds of feed



Carolina Fish Feeds , Greenville, NC

Product Value= \$3,700,000

1/9/2008

## 2006 NORTH CAROLINA CATFISH INDUSTRY VALUE

Farm Gate, Processed Value  
& Feed Milling = \$25,670,400

Economic Impact  
(based on a 5:1 multiplier)  
\$128,352,200

1/9/2008

## 2006 NORTH CAROLINA HYBRID STRIPED BASS INDUSTRY\*

19 Food Fish Producers  
806 Pond Acres  
2,650,000 Pounds

@ \$2.50 – \$2.80 / Pound  
Farm Gate Value = \$6,956,250



Dr. Craig Sullivan  
NC State University

\* Estimated numbers based on pond acres

1/9/2008

## 2006 NORTH CAROLINA HYBRID STRIPED BASS INDUSTRY

4 Hatcheries  
Fingerlings Produced  
6,000,000  
@ \$0.18 – 0.22 each



Harvesting Hybrids in the Winter

Farm Gate Value = \$1,200,000

1/9/2008

## 2006 NORTH CAROLINA TILAPIA INDUSTRY STATUS

9 Growout Barns  
1,716,550 Pounds  
(average price \$1.73 / lb.)

Farm Gate Value  
= \$3,340,407



Dale Pridgen, Tilapia Farmer

1/9/2008

## 2006 NORTH CAROLINA YELLOW PERCH INDUSTRY STATUS

2 Fingerling Growers

250,000 Fish Sold  
Farm Gate Value = \$30,000



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## 2006 NORTH CAROLINA CRAWFISH INDUSTRY STATUS\*

4 Active Growers  
60 Acres  
(no change)

36,000 Pounds

Farm Gate Value = \$108,000

Crawfish



\* Estimated based on pond acres

1/9/2008

## 2006 NORTH CAROLINA FRESHWATER PRAWNS STATUS

8 Growers  
23 Acres @ \$8.00 / lb.

23,000 Pounds

Farm Gate Value =  
\$184,000



Small Production Ponds



Joe Thompson  
Alamance County

1/9/2008

## 2006 NORTH CAROLINA FRESHWATER PRAWNS STATUS

1 Nursery  
300,000 Juveniles



Freshwater Prawn Juveniles

1/9/2008

## 2006 NORTH CAROLINA BAIT EEL PRODUCTION

1 Grower  
Tank Based



George Kuntz, NC Eel Farm

1/9/2008

# 2006 NORTH CAROLINA CLAM & OYSTER INDUSTRY STATISTICS\*

196 Leaseholders

1,906 Acres Planted

8,443 Bushels Clams (up 18.2%)

11,689 Bushels Oysters (up 16.9%)

Farm Gate Value = \$717,031 (down 28.3%)



Washing Oysters

\*preliminary data from Oct. 2005-Oct. 2006

1/9/2008

# 2005 NORTH CAROLINA Blue Crab Shedding INDUSTRY STATISTICS

338 Active Permits

692,392 pounds

Farm Gate Value = \$2,995,199



crab molting



crab shedding tanks

1/9/2008

## 2006 NORTH CAROLINA Aquaculture Operations and Farm Gate Value

169 Farms &  
196 SF Leases

Farm Gate =  
\$29,094,088\*

\*does not include crab shedding



Aquaculture = Diversification for Family Farms

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## 2006 NORTH CAROLINA Aquaculture Processors & Product Value

5 Processing Plants

Processed Product  
Value = \$22,715,000



Sydney Seafood Market

1/9/2008

## 2006 NORTH CAROLINA Aquaculture Farm Gate, Processed Product and Feed Value

**\$55,509,088**

**Way-to-Go North Carolina!!!**

1/9/2008

## 2006 US AQUACULTURE CATFISH USDA STATISTICS

1,035 Farms \*  
170,370 Acres  
602,434,000 Pounds



Selling Catfish

2006 Average Farm-bank  
Price = \$0.796 / lb. (up \$0.07)  
Farm Gate Value = \$482,295,000 ↑ (up 15%)

\*data includes production of foodfish, fingerlings, and stockers

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## 2006 US AQUACULTURE TILAPIA STATUS

150 Farms  
20 - 24 million Pounds  
Farm Gate Value  
= \$ 30 – 36 million

Imports (Estimated 2006)  
350-360 million pounds  
=780-800 m lbs LWE



Tilapia Farm in California

1/9/2008

## 2005 US AQUACULTURE TROUT (USDA) STATISTICS

601 Operations  
(selling or distributing)

61,676,000 lbs.  
(food size & fingerlings)

Farm Gate Value = \$ 74,200,000 (+ 5.4 m)  
(fish sales only)



1/9/2008

# 2005 US AQUACULTURE HYBRID STRIPED BASS OVERVIEW

66 Farms  
12,010,000 Pounds  
Produced  
\$2.68 / lbs. iced  
\$3.08 / lbs. live  
Farm Gate Value = \$ 33,103,200



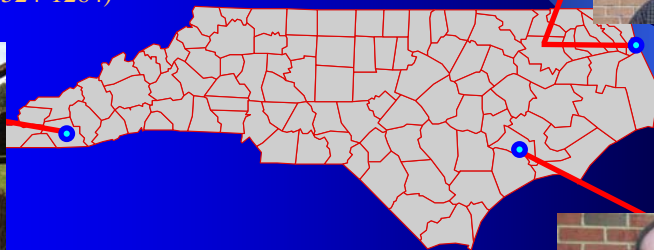
Data courtesy of Dr. Jim Carlberg, Kent Sea Tech 1/9/2008

## Business Planning & Permitting Assistance

Debra Sloan, NCDA & CS  
Aquaculture Business Advisor  
Western NC (828 524-1264)



William Small, NCDA & CS  
Seafood Marketing  
(252 331-4773)



Matt Parker, NCDA & CS  
NCCES  
Aquaculture Economist  
Craven County Ag Bldg.  
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# Technical Assistance

## Western NC Cooperative Extension Service

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Area Aquaculture Agent  
Waynesville, NC  
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NC STATE UNIVERSITY

Molly Sandfoss  
Area Aquaculture Agent  
Marion  
(828 652-7121)



Jeff Hinshaw  
Aquaculture Specialist  
Fletcher, NC  
(828 684-3562)



1/9/2008

# Technical Assistance

## Eastern NC Cooperative Extension Service



Steve Gabel  
Area Aquaculture Agent  
(252 793-2163)



Mike Frinsko  
Area Aquaculture Agent  
(252 448-9621)



Dr. David Green  
Seafood Specialist  
(252 222-6304)

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# Aquaculture Education

## Eastern NC Community Colleges



Mr. Skip Kemp  
Carteret Community  
College  
(252 222-6114)

NC STATE UNIVERSITY



Dr. Doug Holland  
Brunswick Community College  
(910 755-7432)

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# Campus Based Specialists

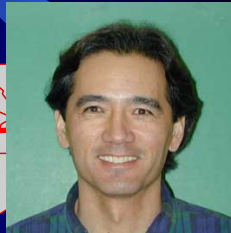


Tom Losordo  
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(919 515-6784)

NC STATE UNIVERSITY



Dennis DeLong  
NC Fish Barn, Raleigh  
(919 513-2106)



Harry Daniels  
NC State, Raleigh  
Tidewater Res. Station  
(919 515-4589)

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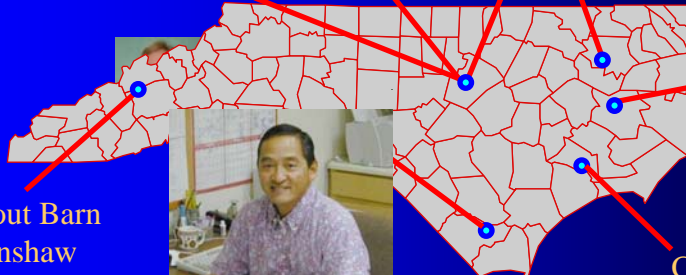
# Aquaculture Research Personnel

NC State  
Fish Barn

Tom Losordo  
Dennis DeLong  
Todd Guerdat

NC State  
College of Vet.  
Medicine, Raleigh

Tidewater Research Station  
Harry Daniels



NC Trout Barn  
Jeff Hinshaw



Pamlico Field Lab  
Craig Sullivan

UNC Wilmington  
Wade Watanabe

CMAS, NCSU  
Seafood Lab  
David Green

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# AQUACULTURE IN EDUCATION

## High Schools

Teaching Science  
through Aquaculture



Mr. Barry Bey, Instructor & Student  
South Brunswick High School

NC STATE UNIVERSITY

1/9/2008

# AQUACULTURE CONFERENCES

(A Public / Private Partnership)

## Major Sponsors

NC Dept. of Agriculture  
NC State University  
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NC Small Business Tech. Dev. Center  
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NC Aquaculture Association



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