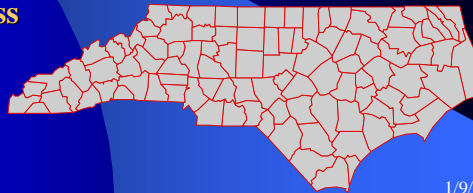


NORTH CAROLINA AQUACULTURE UPDATE 2006

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
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

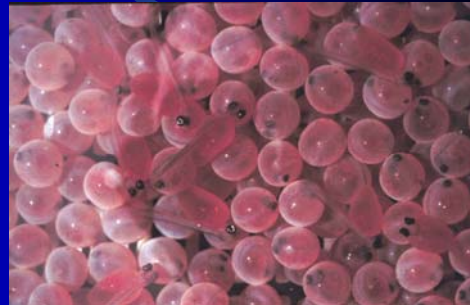
2006 NORTH CAROLINA TROUT INDUSTRY STATUS

17 Hatcheries (+1)

9,529,000 Fingerlings

Produced

@ \$0.09 each



“Eyed” Trout Eggs



Farm Gate Value = \$838,700 ↑

1/9/2008

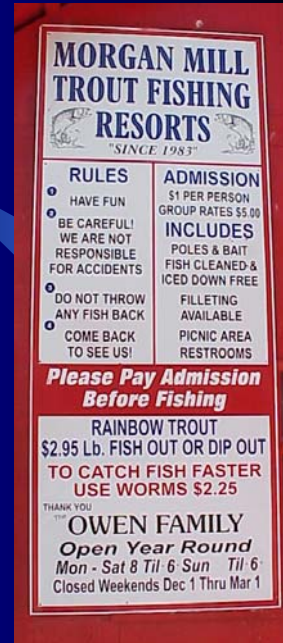
2006 NORTH CAROLINA TROUT INDUSTRY

25 Fee Fishing (-5)
Operations



304,500 Pounds 
@ \$3.35 / Pound 

Farm Gate Value = \$1,020,500



MORGAN MILL TROUT FISHING RESORTS
"SINCE 1983"

RULES <ul style="list-style-type: none">HAVE FUNBE CAREFUL! WE ARE NOT RESPONSIBLE FOR ACCIDENTSDO NOT THROW ANY FISH BACKCOME BACK TO SEE US!	ADMISSION <p>\$1 PER PERSON GROUP RATES \$5.00</p> INCLUDES <ul style="list-style-type: none">POLES & BAITFISH CLEANED & ICED DOWN FREEFILLETING AVAILABLEPICNIC AREARESTROOMS
--	--

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



1/9/2008

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

1/9/2008

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

1/9/2008

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.
(252 633-1477)



NC STATE UNIVERSITY

1/9/2008

Technical Assistance

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NC STATE UNIVERSITY

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



1/9/2008

Technical Assistance

Eastern NC Cooperative Extension Service



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Mike Frinsko
Area Aquaculture Agent
(252 448-9621)



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

NC STATE UNIV

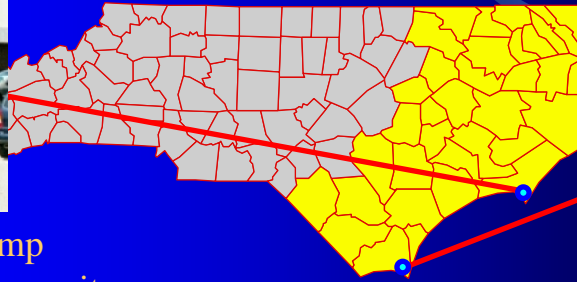
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Aquaculture Education

Eastern NC Community Colleges



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



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

1/9/2008

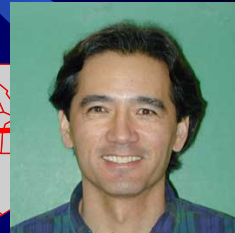
Campus Based Specialists



Tom Losordo
NC State, Raleigh
(919 515-6784)



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



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

1/9/2008

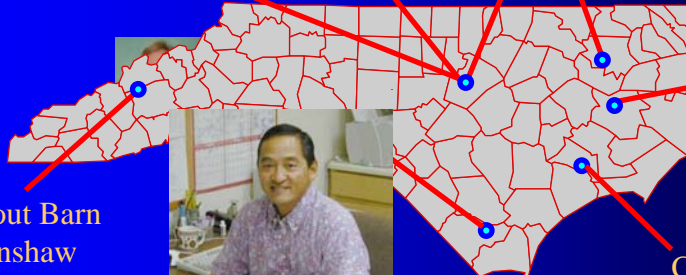
Aquaculture Research Personnel

NC State
Fish Barn

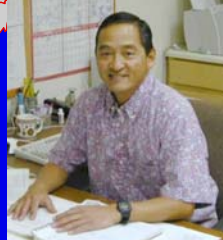
Tom Losordo
Dennis DeLong
Todd Guerdat

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

CMAST, NCSU
Seafood Lab
David Green

NC STATE UNIVERSITY

1/9/2008

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)

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