

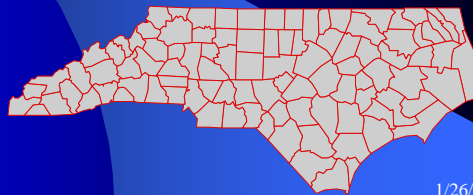
# NORTH CAROLINA AQUACULTURE UPDATE 2009

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**Dept. of Biological and Agricultural Engineering**  
**North Carolina State University**

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**Molly Sandfoss, Skip Thompson**  
**Marc Turano, Harry Daniels**  
**NC Cooperative Extension**

**Debra Sloan, NCDA&CS**



1/26/2010

## Thank you to all of the farms and agencies 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.



1/26/2010

Freshwater

- Trout (82)
- Catfish (22)
- Striped Bass (12)
- Tilapia (9)
- Freshwater Prawns (9)
- Crawfish (4)
- Southern Flounder (1)
- Yellow Perch (2)
- Sturgeon Caviar (1)
- Ornamentals (2)

# 2009 NORTH CAROLINA AQUACULTURE SPECIES



Keith Hairr & Dean Raynor  
at an NC State Flounder  
Workshop

Saltwater

- Clams & Oysters (237 leases)
- Soft Shell Crabs (300 shedders)
- Southern Flounder (1)
- Black Sea Bass (1)

1/26/2010

# NORTH CAROLINA AQUACULTURE BY REGION

Cool and Coldwater  
Flow-Through  
Tank Production

Water Limited  
Recirculating Tank  
Production

Warmwater  
Pond Production



1/26/2010

## 2009 NORTH CAROLINA CATFISH INDUSTRY

Catfish Farm



22 Food Fish Producers  
1,830 Pond Acres  
7,628,000 Pounds  
Weighted Average Price = \$0.82



Farm Gate Value = \$6,247,332

1/26/2010

## 2009 NORTH CAROLINA CATFISH INDUSTRY

1 Fingerling Producer  
4,000,000 fingerlings

Farm Gate Value  
= \$400,000



Catfish FINGER-lings

1/26/2010

## 2009 NORTH CAROLINA CATFISH SALES & PROCESSING

1 Processor

Processed Value=  
\$11,700,000



## 2009 NORTH CAROLINA FEEDS PRODUCTION

1 Mill

Producing 17.2 million  
pounds of feed



Carolina Fish Feeds , Greenville, NC

Product Value= \$3,400,000

## 2009 NORTH CAROLINA CATFISH INDUSTRY VALUE

Farm Gate, Processed  
Value Feed Milling  
= \$21,747,332



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## 2009 NORTH CAROLINA CATFISH INDUSTRY GENERAL TRENDS

Fewer Farms (consolidation)  
Slightly Less Acres of Production  
High Production Intensity  
Relatively Stable Industry Output  
Stable Farmgate Pricing

1/26/2010

## 2009 NORTH CAROLINA HYBRID STRIPED BASS INDUSTRY\*

12 Food Fish Producers

763 Pond Acres\*

2,466,230 Pounds \*

@ \$2.90 – \$3.20 / Pound

Farm Gate Value = \$9,064,700



Dr. Craig Sullivan  
NC State University

\* 12 Active and 11 Reporting production from 701 acres

1/26/2010

## 2009 NORTH CAROLINA HYBRID STRIPED BASS INDUSTRY

4 Hatcheries

4,950,000 Fingerlings  
Produced

@ \$0.17 - \$0.40 each

Farm Gate Value = \$1,237,500



Moving & Grading Hybrid Bass Fingerlings

1/26/2010

## 2009 NORTH CAROLINA HYBRID STRIPED BASS INDUSTRY GENERAL TRENDS

Fewer Farms  
More Farms Reporting this Year  
Stable Acres of Production  
Higher Production Intensity  
Stable Output  
Stable Farmgate Pricing

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## 2009 NORTH CAROLINA TILAPIA INDUSTRY STATUS

9 Growout Fish Barns\*

967,140 Pounds

average price \$2.19/ lb.

Farm Gate Value

= \$2,143,483

\*One is a new farm with no production  
in 2009

\$2,309,136 (in 2008)



Dale Pridgen, Tilapia Farmer

1/26/2010

## 2009 NORTH CAROLINA TILAPIA INDUSTRY STATUS

4 Fingerling Barns

1,386,368 each

approx. \$0.60 each

Farm Gate Value

= \$831,208



Rick Jones, NCSU

1/26/2010

## 2009 NORTH CAROLINA TILAPIA INDUSTRY GENERAL TRENDS

More Farms have their Own Nursery

Existing Farms Restocked from Nurseries

Stable Production Intensity

Output is Stabilizing set for Growth

Stable Farmgate Pricing

One New Farm in 2009, One Being Built  
in 2010

1/26/2010



## 2009 NORTH CAROLINA FLOUNDER INDUSTRY STATUS

1 Operation: Hatchery & Nursery  
150,000 fingerlings produced

2 Growout Operations: One  
freshwater, one brackish  
14,000 lbs. combined  
Farm Gate Value = \$56,000



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## 2009 NORTH CAROLINA FLOUNDER INDUSTRY GENERAL TRENDS

Continued Strong Interest

One New Large Farm Being Built in 2010

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## 2009 NORTH CAROLINA BLACK SEA BASS STATUS

1 R & D Operation at  
UNC Wilmington. Project  
Sponsor Carolina Black  
Sea Bass



2,500 lbs Produced

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## 2009 NORTH CAROLINA YELLOW PERCH STATUS

2 Fingerling Growers  
5 Acres of Production



400,000 Fish Sold (@\$.10 each)  
Farm Gate Value = \$40,000

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## 2009 NORTH CAROLINA CRAWFISH INDUSTRY STATUS\*

4 Active Growers  
29 Acres

10,200 Pounds  
\$3.50 / lb.

Farm Gate Value = \$35,700  
Stable Industry



Crawfish

1/26/2010

## 2009 NORTH CAROLINA FRESHWATER PRAWNS STATUS

9 Growers Active  
38 Acres  
32,000 Pounds  
30% frozen tails \$16 / lb.  
70% whole fresh \$8 / lb.  
Farm Gate Value =  
\$256,000



Small Production Ponds



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# 2009 NORTH CAROLINA FRESHWATER PRAWNS STATUS

1 Nursery  
390,000  
Juveniles



Freshwater Prawns

1/26/2010

# 2009 NORTH CAROLINA PRAWN INDUSTRY GENERAL TRENDS

- \* Continued Strong Interest
- \* Good Coordination via Coop
- \* Market Shift from Frozen Tails to Whole Fresh Product
- \* One New Farm Built in 2009 will be in Production in 2010

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# 2009 NORTH CAROLINA CLAM & OYSTER INDUSTRY STATISTICS\*

237 Leaseholders  
1,844 Acres Planted  
4,175 Bushels Clams  
5,011 Bushels Oysters  
Farm Gate Value = \$380,737



\*data from July 1, 2008 – June 30, 2009

1/26/2010

# 2009 NORTH CAROLINA Blue Crab Shedding INDUSTRY STATISTICS

300 Active Permits  
199,072 pounds  
Farm Gate Value = \$1,139,527



crab molting



crab shedding tanks

1/26/2010

## 2009 NORTH CAROLINA SHELLFISH AND CRAB SHEDDING GENERAL TRENDS

- \* Stable Clam Output
- \* Reduced Oyster Output
- \* More Crab Shedder, Slightly Less Output

1/26/2010

## 2009 NORTH CAROLINA TROUT INDUSTRY

40 Food Fish Producers (-1)

4,388,000 Pounds (+ 22%)

@ \$1.42 / Pound (- \$0.02)

Farm Gate Value = \$6,225,450 (+23%)

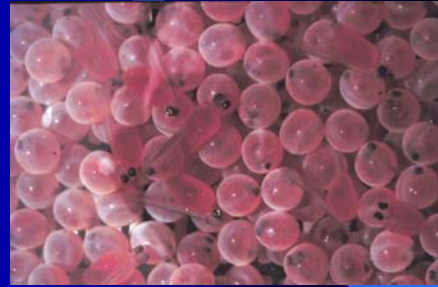


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# 2009 NORTH CAROLINA TROUT INDUSTRY

17 Hatcheries (-2)  
9,454,500 Fingerlings (-1%)

@ \$0.08 each (nc)



“Eyed” Trout Eggs

Farm Gate Value = \$790,550

1/26/2010

# 2009 NORTH CAROLINA TROUT INDUSTRY

24 Fee Fishing  
Operations (-2)

260,000 Pounds (-4.4%)

@ \$4.13 / Pound (+ \$0.33)



Farm Gate Value = \$1,074,250 (+3.9%)

**MORGAN MILL  
TROUT FISHING  
RESORTS**  
SINCE 1983

|                                                                                                                                                                                                |                                                                                                                                                                                                                                                            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>RULES</b> <ul style="list-style-type: none"><li>HAVE FUN</li><li>BE CAREFUL! WE ARE NOT RESPONSIBLE FOR ACCIDENTS</li><li>DO NOT THROW ANY FISH BACK</li><li>COME BACK TO SEE US!</li></ul> | <b>ADMISSION</b> <p>\$1 PER PERSON<br/>GROUP RATES \$5.00</p> <b>INCLUDES</b> <ul style="list-style-type: none"><li>POLES &amp; BAIT</li><li>FISH CLEANED &amp; ICED DOWN FREE</li><li>FILLETING AVAILABLE</li><li>PICNIC AREA</li><li>RESTROOMS</li></ul> |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**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

1/26/2010

## 2009 NORTH CAROLINA TROUT INDUSTRY STATUS

2 Processors (nc)

1,700,000 lbs (+6.25%)  
(processed product)

Average Price  
of Products

= \$5.17 / pound (+\$0.08)



Value Added Trout Products

Value = \$8,795,000 (+8%)

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## 2009 NORTH CAROLINA TROUT INDUSTRY IMPACT

Farm Gate and  
Processed Product  
Value = \$16,885,250

(+ \$1,860,400 ; +12.4%)



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# 2009 NORTH CAROLINA TROUT INDUSTRY GENERAL TRENDS

- \* Recovery from the Drought
- \* Recovered Output to Pre-Drought Levels
- \* Higher Pricing

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## 2009 NORTH CAROLINA

**Sturgeon (for caviar)**    **The LaPaz Group, LLC**  
**Happy Valley, NC**



Starting with a gift by William  
White to The NC State  
College of Ag and Life Sciences

Managing Partner: Joe Doll

56% Ownership of LaPaz  
+ \$3.8 million Gift

To complete the farm, conduct  
research and training, and to bring  
the company to profitability

1/26/2010

## 2009 NORTH CAROLINA

### Sturgeon (for caviar)

The LaPaz Group



**Rick Jones, NC State  
Graduate Research  
Assistant**



**Building 2**



**Atlantic Sturgeon,  
Russian Sturgeon  
Siberian Sturgeon**

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## 2009 NORTH CAROLINA Aquaculture Operations and Farm Gate Value

146 Farms &  
237 Shell Fish Leases  
300 Crab Sheddors

Farm Gate = \$29,924,237

\$29,953,722 (in 2008; - < 0.1% )



1/26/2010

## 2009 NORTH CAROLINA Aquaculture Processors & Product Value

3 Processing Plants

Processed Product  
Value = \$20,495,000

\$20,940,000 (in 2008; = -2.1%)



Sydney Seafood Market

1/26/2010

## 2009 NORTH CAROLINA Aquaculture Farm Gate, Processed Product and Feed Value

**\$53,819,237**

\$54,893,722 (in 2008; - <2% )

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# 2009 NORTH CAROLINA A New Research Facility

## Marine Aquaculture Research Center



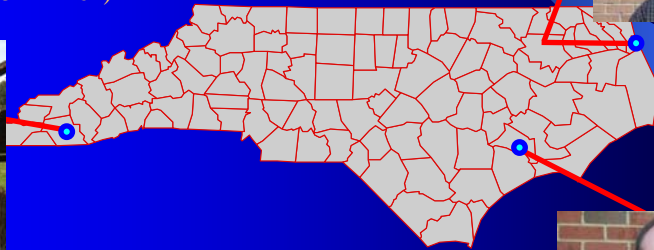
Made possible with a  
generous gift from  
Dr. IJ and Sue Won

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# Business Planning & Permitting Assistance

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

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



Mr. Matt Parker, NCDA &  
CS  
NCCES  
Aquaculture Economist  
Craven County Ag Bldg.  
(252 633-1477)



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# Technical Assistance

## Western NC Cooperative Extension Service

Mr. Skip Thompson  
Area Aquaculture Agent  
Waynesville, NC  
(828 456-3575)



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



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



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# Technical Assistance

## Eastern NC Cooperative Extension Service



Mr. Steve Gabel  
Area Aquaculture Agent  
(252 482-6585)



Mr. Mike Frinsko  
Area Aquaculture Agent  
(252 448-9621)



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

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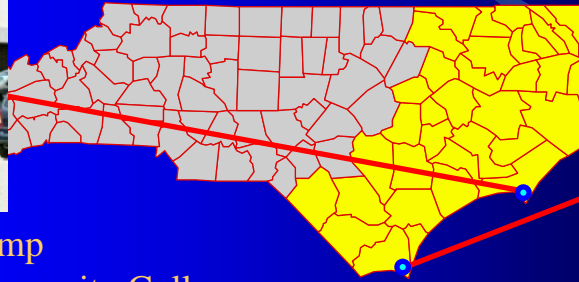
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# Aquaculture Education

## Eastern NC Community Colleges



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



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

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# Campus Based Specialists



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



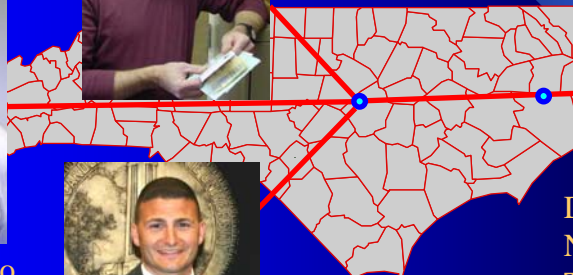
Mr. Dennis DeLong  
NC Fish Barn, Raleigh  
(919 513-2106)



Dr. Marc Turano  
Sea Grant, NC State  
(919 513-0122)



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



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# Aquaculture Research Personnel

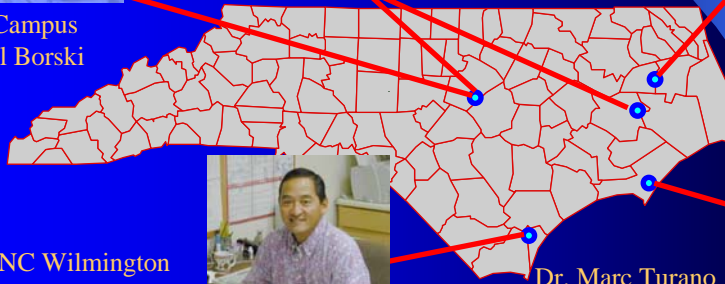
Dr. Harry Daniels  
NC State, Raleigh  
Tidewater Res. Stn



NC State Campus  
Dr. Russell Borski



NC State Campus  
Pamlico Field Lab  
Dr. Craig Sullivan



UNC Wilmington  
Dr. Wade Watanabe



Dr. Marc Turano  
Marine Aquaculture  
Research Center

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# NCSU College of Veterinary Medicine



Dr. Ed Noga



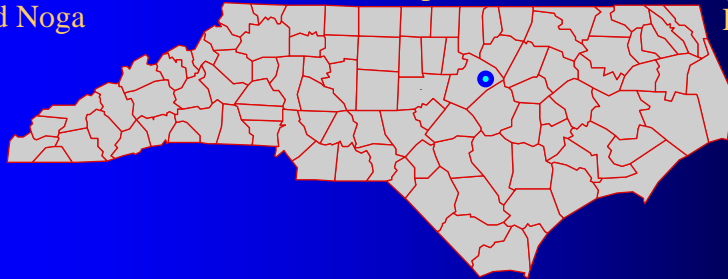
Dr. Michael Stoskopf



Dr. Jay Levine



Dr. Greg Lewbart



Dr. Craig Harms

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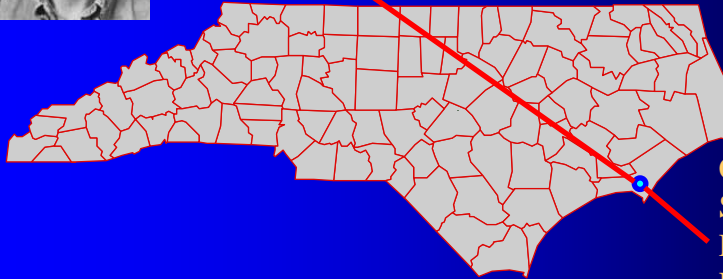
# Aquaculture Research Personnel



Center for Marine Science & Technology, NCSU  
Dr. David Eggleston  
Professor  
Center Director



CMAST, NCSU  
Seafood Lab  
Dr. David Green  
Professor  
Ext. Specialist



# AQUACULTURE IN EDUCATION

## High Schools

Teaching Science  
through Aquaculture



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



# AQUACULTURE CONFERENCES

A Public / Private Partnership for 21 Years

## Major Sponsors

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