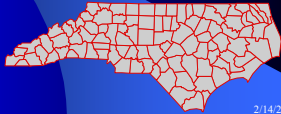


NORTH CAROLINA AQUACULTURE UPDATE 2004

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

Steve Gabel, Mike Frinsko, Jeff Hinshaw
Skip Thompson and Molly Sandfoss
NC Cooperative Extension

Matt Parker, Debra Sloan
NCDA & CS



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

“I’m from the government and I am here to help you!”

This presentation may be found at:
www.ncaquaculture.org

2004 NORTH CAROLINA AQUACULTURE SPECIES

- Catfish
- Crawfish
- Eels
- Ornamentals
- Striped Bass
- Tilapia
- Trout
- Yellow Perch
- Flounder
- Black Sea Bass
- Large Mouth Bass
- Freshwater Prawns
- Clams
- Oysters
- Soft Shell Crabs



Aquaculture Research at NC State
In-Pond Fish Grader



Aquaculture Education at BCC
Aquaculture Center Director

NORTH CAROLINA AQUACULTURE BY REGION

Cool and Coldwater
Flow-Through
Tank Production

Water Limited
Recirculating Tank
Production

Warmwater
Pond Production



2004 NORTH CAROLINA TROUT INDUSTRY STATUS

44* Food Fish Producers (-11)
5.45 Million Pounds (-0.5 m)

@ \$1.31 / Pound (\$1.38)

Farm Gate Value = \$7,116,600 ↓



* Decline reflects some buy-outs and hurricane losses

2004 NORTH CAROLINA TROUT INDUSTRY STATUS

16 Hatcheries (-1)
9,392,000 Fingerlings ↑
Produced
@ \$0.08 each ↔



“Eyed” Trout Eggs

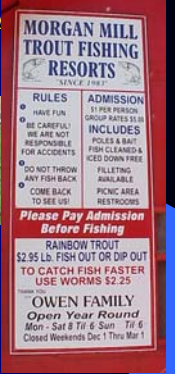
Farm Gate Value = \$763,200 ↑

2004 NORTH CAROLINA TROUT INDUSTRY

32 Fee Fishing (+4) Operations

357,500 Pounds
@ \$3.20 / Pound

Farm Gate Value = \$1,145,625



2/14/2005

2004 NORTH CAROLINA TROUT INDUSTRY STATUS

4 Processors

2,200,000 lbs
Average Price
of Products
= \$4.27 / pound

Value = \$9,390,000



Value Added Trout Products

2/14/2005

2004 NORTH CAROLINA TROUT INDUSTRY IMPACT

Farm Gate and
Processed Product
Value = \$18,415,425

Economic Impact

(based on a 5:1 multiplier)
\$92,000,000



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2004 NORTH CAROLINA CATFISH INDUSTRY STATUS

46 Food Fish Producers (-1)
2,488 Pond Acres
10,000,000 Pounds
(up from 9.3 m in 2003 and 7.3 m in 2002)
average price \$0.709 / Pound
up from \$0.59 last year average
currently = \$0.74

Farm Gate Value = \$7,009,000



Harvesting Catfish

2/14/2005

2004 NORTH CAROLINA CATFISH INDUSTRY STATUS

1 Fingerling Producer
2,500,000 fingerlings

Farm Gate Value
= \$225,000



Catfish FINGER-lings

2/14/2005

2004 NORTH CAROLINA CATFISH PROCESSING

1 Processor
Producing 5.3 million
pounds of processed
product.

Processed Value= \$13,000,000



Carolina Classics Catfish Processing Plant
Ayden, NC



2/14/2005

2004 NORTH CAROLINA FEEDS PRODUCTION

1 Mill

Producing 25.2 million pounds of feed

Product Value = \$4,500,000



Carolina Fish Feeds
Greenville, NC

2/14/2005

Carolina Classics A North Carolina Success Story

Catfish Fingerlings
Catfish Farming
Catfish Processing
Aquaculture Feeds

Employing 140
North Carolinians
& 41 Farm Families

With 2004 Sales of \$18 m



CAROLINA FISH FEEDS

2/14/2005

2004 NORTH CAROLINA HYBRID STRIPED BASS INDUSTRY

19 Food Fish Producers (-1)
13 Farms Selling Fish
760 Pond Acres (-75)
2,179,000 Pounds

@ \$2.50 – \$3.00 / Pound

Farm Gate Value = \$5,992,250



Dr. Craig Sullivan
NC State University

2/14/2005

2004 NORTH CAROLINA HYBRID STRIPED BASS INDUSTRY

3 Hatcheries
Fingerlings Produced
2 Reporting
3,200,000
@ \$0.18 – 0.22 each

Farm Gate Value = \$640,000



Dr. Craig Sullivan
NC State University

2/14/2005

2004 NORTH CAROLINA TILAPIA INDUSTRY STATUS

8 Growers

1,285,733 Pounds* 
(average price \$1.60 / lb.) 

Farm Gate Value
= \$2,057,172



Dale Pridgen, Tilapia Farmer

* Due to a disruption in fingerling supply

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2004 NORTH CAROLINA TILAPIA INDUSTRY STATUS

3 Nurseries

1,448,000 Advanced
Fingerlings

Farm Gate =
\$708,740



Southern Farm Tilapia
Unit 1: TA Dean Farms

2/14/2005

2004 NORTH CAROLINA TILAPIA INDUSTRY STATUS

1 Hatchery

(1,000,000 - 1 gram each) ↑

used for the production of advanced fingerlings



Tilapia are Mouth Brooders
Notice Eggs in the mouth

2/14/2005

Southern Farm Tilapia Another North Carolina Success Story



1997
Beginning
in with a small
Hatchery

2005 – Harvesting
from 8 production
facilities & producing
a full line of labeled
aquaculture and
seafood products



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2004 NORTH CAROLINA YELLOW PERCH INDUSTRY STATUS

2 Hatcheries

2 Fingerling Growers

292,000 Fish ↓

Farm Gate Value = \$42,500



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2004 NORTH CAROLINA YELLOW PERCH INDUSTRY STATUS

1 Nursery & Growout Operation

Declining prices
forced a change to
another species. (price drop from \$2.75 - \$1.40 / lb.)



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2004 NORTH CAROLINA CRAWFISH INDUSTRY STATUS

4 Active Growers ↓

60 Acres ↑

36,000 Pounds ↑

Farm Gate Value = \$108,000 ↑



Crawfish

2/14/2005

2004 NORTH CAROLINA FRESHWATER PRAWNS STATUS

2 Active Growers

5 Acres

3,600 Pounds

Farm Gate Value = \$25,200



Macrobrachium rosenbergii

2/14/2005

2004 NORTH CAROLINA BAIT EEL PRODUCTION

1 Grower
Tank Based

“A Good Year
Marketing Eels”



George Kuntz, NC Eel Farm

2/14/2005

2003 NORTH CAROLINA CLAM & OYSTER INDUSTRY STATISTICS

280 Active Leases
2,077 Acres Planted

11,939 Bushels Clams
5,947 Bushels Oysters

Farm Gate Value = \$1,000,000



Shellfish Lease

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2004 NORTH CAROLINA Aquaculture Operations and Farm Gate Value

170 Farms &
280 SF Leases
Farm Gate =
\$26,679,515



Aquaculture Means Diversification for Family Farms

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2004 NORTH CAROLINA Aquaculture Processors & Product Value

6 Operations
Processed Product
Value =
\$22,810,000



Sydney Seafood Market

2/14/2005

2004 NORTH CAROLINA Aquaculture Farm Gate, Processed Product and Feed Value

\$53,989,515

Way-to-Go North Carolina!!!

2/14/2005

2004 US AQUACULTURE CATFISH STATUS

1,158 Farms
173,590 Acres (- 2%)
630,000,000 Pounds (- 4.7%)



Selling Catfish

Farm-bank Price = \$0.697 / lb. ↑ (up from \$0.581)
Farm Gate Value = \$ 480,000,000 ↑ (+ 14%)

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2004 US AQUACULTURE TILAPIA STATUS

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

Imports (2004)
244 million pounds
19% ↑
= 490 m lbs. LWE



Tilapia Farm in California

2/14/2005

2003 US AQUACULTURE TROUT STATISTICS

545 Producers (- 61)
56,781,000 lbs.
(fish & fingerlings)



Farm Gate Value = \$ 62,265,000 (- 2.5 m)

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2004 US AQUACULTURE HYBRID STRIPED BASS OVERVIEW

61 Farms
11,447,000 Pounds
Produced
\$2.63 / lbs. iced
\$3.13 / lbs. live
Farm Gate Value = \$ 31,345,500



Hybrid
Striped Bass

2/14/2005

Business Planning & Permitting Assistance

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(252 331-4773)

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



Matt Parker, NCDA & CS
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Aquaculture Economist
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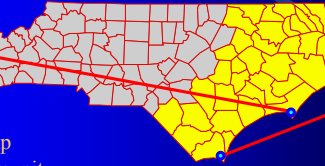
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Aquaculture Education Eastern NC Community Colleges



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College
(252 222-6114)



Dr. Doug Holland
Brunswick Community College
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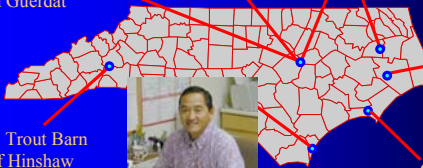
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Aquaculture Research Personnel

NC State
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Dennis DeLong
Todd Guerdat

NC State
College of Vet.
Medicine, Raleigh

Tidewater Research Station
Harry Daniels
Ryan Murashige



NC Trout Barn
Jeff Hinshaw



UNC Wilmington
Wade Watanabe

Pamlico Field Lab
Craig Sullivan
CMAST, NCSU
Seafood Lab
David Green

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AQUACULTURE IN EDUCATION High Schools

Teaching Science
Through Aquaculture



Barry Bey & Students

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AQUACULTURE CONFERENCES

(A Public / Private Partnership)
Major Sponsors

NC Dept. of Agriculture
NC State University
NC Farm Bureau
NC Small Business Tech. Dev. Center
NC Soil & Water Conservation Society
NC Sea Grant
NC Aquaculture Association

17th NC Annual Aquaculture
Development Conference,
February 11 & 12, 2005
Sheraton Atlantic Beach, NC

Our Corporate Sponsors

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