2020 NC Aquaculture Development Conference

NEW BERN RIVERFRONT CONVENTION CENTER
March 12 - Aquaculture Intro Course & Freshwater Farm Tour
March 13 - Conf. Presentations & Industry Tradeshow Mixer
  Friday evening: Famous Cultured Seafood Festival
March 14 - Mariculture Presentations & Tour

UNCW  Sea Grant  sbtgc  got to be NC SEAFOOD
North Carolina Aquaculture Association  NCA&TA
FARM BUREAU  NORTH CAROLINA  NC  COOPERATIVE EXTENSION  NC STATE UNIVERSITY

NEW BERN  CITY OF NEW BERN
Thank you Sponsors!

GOLD LEVEL SPONSOR

Aquatic Equipment & Design Inc.
Thank you Sponsors!

SILVER LEVEL SPONSOR

algafeed
The Algal Revolution

<company-logo>
nutrition through innovation
Thank you Agency Sponsors!

SILVER LEVEL SPONSOR

FARM BUREAU
NORTH CAROLINA

North Carolina Aquaculture Association

NATIONAL AQUACULTURE ASSOCIATION
Thank you Sponsors!

BRONZE LEVEL SPONSOR

Alltech®

Blue Ridge Aquafeeds

xylem
Let’s Solve Water

Cargill®
Thank you Agencies!
• SBTDC – Michael Twiddy
• NCDA – Ron Fish, John Aydlett, Pete Anderson
• NCCE – Steve Gabel, Mike Frinsko
• UNCW – Jay Styron
• NC Farm Bureau – Debbie Hamrick
• NCSU – Steve Hall
• NCAA – Randy Gray and the NCAA Board
STATE UPDATE

2019 Farm data and Industry statistics from the NC Aquaculture Industry
Thank you to all of the farms and agencies that provided data for this presentation!

For a copy, please see our website: www.ncaquaculture.org
2019 North Carolina Freshwater Aquaculture
Farms (current number) reporting production in 2019

• 107 farms reporting (-1)
  – Trout (70)
  – Catfish (6)
  – Hybrid Striped Bass (10)
  – Tilapia (7)
  – Fresh Water Prawns (1)
  – Crawfish (9)
  – Large Mouth Bass (2)
  – Sturgeon (2)
15 Years of NCADC Surveys

Total number of farms according to NCADC State Update Presentations
15 Years of NCADC Surveys

Total dollar value from the NC Aquaculture Industry according to NCADC State Update Presentations

Continued Growth?

What about 2020?
• **NCSU & NC Extension**
  - Harry Daniels: Freshwater Aquaculture Production

• **NC Sea Grant**
  - Frank Lopez: Marine Aquaculture Production

• **NCDA&CS**
  - Ron Fish: Aquaculture Industry Value & Resources

For a copy, please see our website: www.ncaquaculture.org
North Carolina Aquaculture Technical Assistance
NCSU Campus-Based

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

Dr. Ben Reading
NC State, Raleigh
(919) 515-3830

Dr. Jeff Hinshaw
NC State, Mills River
(828) 684-3562

Dr. Steve Hall
NC State, Raleigh
(919) 515-2954
Aquaculture Research Personnel

Dr. Russell Borski
NC State, Raleigh

Dr. Harry Daniels
NC State, Raleigh

Dr. Ben Reading
NC State, Raleigh

Dr. Jeff Hinshaw
NC State

Dr. Wade Watanabe
UNC Wilmington
Aquaculture Research Personnel

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

Marine Aquaculture Research Center
Ryan Kelly
Extension Assistant
NC Aquaculture - Regional Production

- Cool & coldwater Flow-through Tank production
- Recirculating tank production
- Warmwater pond & marine aquaculture
2019 North Carolina Trout Industry

• Food fish production
  35 producers (n/c)
  4,960,500 lbs. (-1%)
  $1.99/ lbs. (+6.4%)

• Farm gate value=
  $9,869,450 (+4.7%)
2019 North Carolina Trout Industry

• Fingerling production
  15 Hatcheries (n/c)
  10,148,500 fingerlings (+17.2%)
  $0.11/ fingerling (n/c)

• Farm gate value=
  $1,118,750 (+19.4%)
2019 North Carolina Trout Industry

• Fee fishing operations
  18 operations (-2)
  182,500 lbs. (-4.7%)
  $5.83/ lb. (+14.1%)

• Farm gate value=
  $1,064,500 (+8.7%)
2019 North Carolina Trout Industry

- Processing
  3 processors (n/c)
  1,765,000 lbs. (-5.7%)
  Avg. price $6.94/lb. (-0.3%)

Value = $11,555,100 (5.4%)
2019 North Carolina Trout Industry

• Trends
  – Industry remains stable
  – Supply below demand
  – High temps in late summer

• Total Combined Value
  Farm gate and processing

* $23,608,450 (+0.3%)
Trout Industry Value

- Foodfish Value
- Fingerling Value
- Fee Fishing Value
- Processed value
- Total Value

Graph showing the value of trout industry from 2000 to 2019.
2019 North Carolina Catfish Industry

- Food fish production
  - 6 producers (-2)
  - 1100 pond acres (-20%)
  - 2,800,000 lbs. (+40.0%)
  - $1.15/lb. (-$0.017/lb)

- Farm gate = $3,220,000 (+36.8%)
2019 North Carolina Catfish Industry

- Fingerling production
  0 producer (n/c)
  0 Fingerlings
- Switching to Hybrid catfish

Farm gate = $0
2019 North Carolina Catfish Industry

- Processing
  1 Processor (n/c)
  (Carolina Classic Catfish Inc.)
  3,096,190 lbs processed

Processed value
$6,000,000 (-11.3%)
2019 North Carolina Feeds Production

- 1 Mill – Greenville, NC

Production value = $1,157,320 (-51.8%)
2019 North Carolina Catfish Industry

• Trends
  - Decrease in production
  - Imports and high feed costs
  - Remains a major NC cultivar

• Total Combined Value
  Farm gate, processing, feed milling
  * $10,377,320 (-14.3%)
2019 NC Hybrid Striped Bass Industry

- Food fish production
  10 producers (n/c), 12 farms (n/c)
    9 pond producers
    1 tank producer
  2,988,900 lbs. (-13.6%)

Markets
  $4.34 /lb. (+7.9%)
  Farm gate = $13,770,826 (-1.0%)  *all major farms reporting!
Hybrid Striped Bass Producers

No. producers
No. hatcheries

Ibs of Hybrid Striped Bass Food Fish Produced
2019 NC Hybrid Striped Bass Industry

Fingerling production
3 producers (n/c)

3,196,000 fingerlings (+17.5%)
@ $.25 each

TOTAL Farm gate value $799,000 (+17.5%)
2019 NC Hybrid Striped Bass Industry

• **Trends**
  - Live market focused
  - Diversity added with LMB on split live haul trips
  - Farms increasing production to meet market opportunities
  - Freeze during winter hurt production

• **Total Combined Value**
  Food fish and fingerlings * $13,770,826 (-5.6%)
2019 Largemouth Bass Industry

2018 - First Year Reported

2 Producers

900 lbs. Produced for pond stocking

$7.00/lb.

Farm Gate Value = $6300
2019 North Carolina Tilapia Industry

- Food fish production
  7 producers* (+1)
  Tank-based RAS
  1,288,050 lbs. (+25.8%)
  $2.65/ lb. (+7.7%)

Farm gate=
$3,413,333 (+35.6%)
2019 North Carolina Tilapia Industry

- Fingerling production
  3 producers (n/c)
  481,016 sold (+262%)
  $0.52 /fingerling (+4%)

Farm gate=
$ 250,128 (+277%)
2019 North Carolina Tilapia Industry

- Fresh Keepers Cooperative
- Southern States no longer producing

- General Trends
  - Production decreased
  - Slight price increase
  - Fingerling production decrease

- Total Combined Value
  Food fish and fingerlings
  * $3,663,461 (+41.8%)
2019 NC Freshwater Prawn Industry

1 active producer
- Co-op no longer selling product
- Cheap imports have severely impacted markets
- Opportunities with pondside sales
2019 North Carolina Crawfish Industry

- 9 active growers (+2)
- 10,879 lbs. produced (-27%)
- $4.82/lb. (wt. avg.)

Farm gate = $52,437 (-27%)

- Winter freeze hurt production.
- Anticipating more producers for next year.
2019 North Carolina Sturgeon Production

- 2 production facilities
  - 1 owner
  - Marshallberg Farms:
    Marshallberg, NC
    Happy Valley, NC

- 2 species of sturgeon produced in NC:
  - Siberian
  - Russian
Sturgeon production in NC is still in a start-up phase due to the maturation age required for these fish. 92% of the value of this production is from caviar and 8% from the meat.
• **NCSU & NC Extension**
  - Harry Daniels: Freshwater Aquaculture Production

• **NC Sea Grant**
  - Frank Lopez: Marine Aquaculture Production

• **NCDA&CS**
  - Ron Fish: Aquaculture Industry Value & Resources

For a copy, please see our website:
www.ncaquaculture.org
NC Aquaculture Industry – State Update – Shellfish
2020 NC Aquaculture Development Conference

Frank Lopez, Extension Director
NC Products

Eastern oysters

Soft shell blue crabs

Hard clams
2019 NC Farmed Oyster production

2019: 104,674 bushels (+34% increase)

2019 data is preliminary
2019 NC Farmed Oyster value

2019: $2,726,389 (+27%)

2019 data is preliminary
2019 NC Hard Clam production

2019: 1,786 Bushels (-10.9%)

2019 data is preliminary
2019 NC Hard Clam value

2019: $112,436 (-30.1%)

2019 data is preliminary
2019 NC Blue Crab Shedding production & value

Production
850,992 lbs.

Value
$2.22 million

2019 data is preliminary
2019 NC Blue Crab Shedding production & value

2019 data is preliminary
Hurricane Florence delivered a $10.5 million hit to the industry in September 2018.

<table>
<thead>
<tr>
<th>County</th>
<th>Shellfish Operations</th>
<th>Farm Acreage</th>
<th>Property Damage</th>
<th>Product Loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dare</td>
<td>3</td>
<td>15</td>
<td>$1,500</td>
<td>$80,000</td>
</tr>
<tr>
<td>Beaufort / Hyde</td>
<td>3</td>
<td>9</td>
<td>$2,500</td>
<td>$39,300</td>
</tr>
<tr>
<td>Pamlico</td>
<td>4</td>
<td>34</td>
<td>$1,808,000</td>
<td>$2,470,000</td>
</tr>
<tr>
<td>Carteret</td>
<td>25</td>
<td>79</td>
<td>$414,100</td>
<td>$4,364,990</td>
</tr>
<tr>
<td>Onslow</td>
<td>13</td>
<td>71</td>
<td>$11,000</td>
<td>$654,200</td>
</tr>
<tr>
<td>Pender</td>
<td>6</td>
<td>18</td>
<td>$16,500</td>
<td>$221,475</td>
</tr>
<tr>
<td>New Hanover</td>
<td>4</td>
<td>13</td>
<td>$21,800</td>
<td>$516,750</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>58</strong></td>
<td><strong>239</strong></td>
<td><strong>$2,275,400</strong></td>
<td><strong>$8,346,715</strong></td>
</tr>
</tbody>
</table>
My village:

Thanks to Jacob Boyd, NCDMF; Dave Cerino, Carteret County Community College; and Chuck Weirich, NOAA Sea Grant for providing data and information.
Questions?

fmlopez@ncsu.edu

919-515-3012
• NCSU & NC Extension
  -Harry Daniels: Freshwater Aquaculture Production

• NC Sea Grant
  -Frank Lopez: Marine Aquaculture Production

• NCDAC&CS
  -Ron Fish: Aquaculture Industry Value & Resources

For a copy, please see our website:
www.ncaquaculture.org
2019 North Carolina Aquaculture Industry Value Summary - Freshwater Species (food fish)

% of Pounds from Food Fish Sold 12,230,799 lbs.
- Trout: 41%
- Catfish: 23%
- HSB: 25%
- Tilapia: 11%
- LMB: 0%
- Crawfish: 0%

% of Dollar Value from Farm Gate Food Fish Sales $29,126,340
- Trout: 37%
- Catfish: 10%
- HSB: 42%
- Tilapia: 11%
- LMB: 0%
- Crawfish: 0%
2019 North Carolina Aquaculture Industry Summary - All Except Processed Product

- Includes:
  - Freshwater foodfish
  - Marine species
  - Fingerling production
  - All farms
  - Shellfish leases
  - Crab shedding permit holders

Value = $38,264,549 (-5.9%)
2019 NC Aquaculture Industry Summary

• Processors and product value
  – 4 processing facilities, 3 Trout, 1 Catfish (n/c)

Processed product value = $17,555,100 (-7.5%)
2019 NC Aquaculture Industry Summary

- Total Value
  - Production farm gate
  - Processed product
  - Feed produced

Value to NC = $56,531,761 (-5.1%)
So how do we make it grow?

Total dollar value from the NC Aquaculture Industry according to NCADCA State Update Presentations

What will the next 10 years hold?

What ways can we help it grow?
Aquaculture Education in North Carolina

- NC Community College System
  - Carteret Community College
    - Phone: (252 222-6114)
  - Brunswick Community College
    - Phone: (910 755-7432)
Aquaculture Research Personnel

Dr. Russell Borski
NC State, Raleigh

Dr. Harry Daniels
NC State, Raleigh

Dr. Ben Reading
NC State, Raleigh

Dr. Steve Hall
NC State, Raleigh

Dr. Jeff Hinshaw
NC State

Dr. Wade Watanabe
UNC Wilmington
North Carolina Aquaculture Technical Assistance
NC Cooperative Extension (West)

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

Dr. Jeff Hinshaw
Aquaculture Specialist
Mills River, NC
(828) 684-3562
Debra Sloan  
Aquaculture-Agribusiness Advisor  
NASAC President, NC Representative  
Western NC  (828) 524-1264

Pete Anderson  
Aquaculture Consultant  
NCAA Representative  
(252) 633-1477

John Aydlett  
Seafood Marketing  
(252) 331-4773
YOUR Aquaculture Associations – Join them!
Thank you!
For making this year another successful conference!