

2020 NC Aquaculture Development Conference



NEW BERN

CITY OF NEW BERN

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

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Thank you Agencies!





2020 NC Aquaculture Development Conference



- **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**



**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!

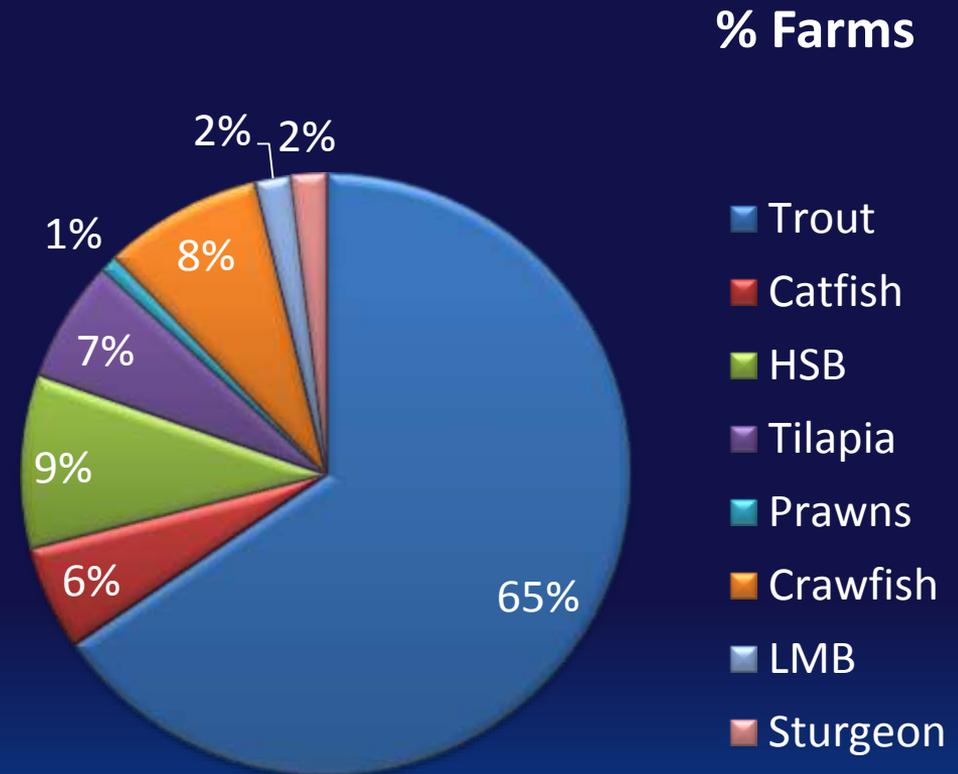


For a copy, please see our website:
www.ncaquaculture.org

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)



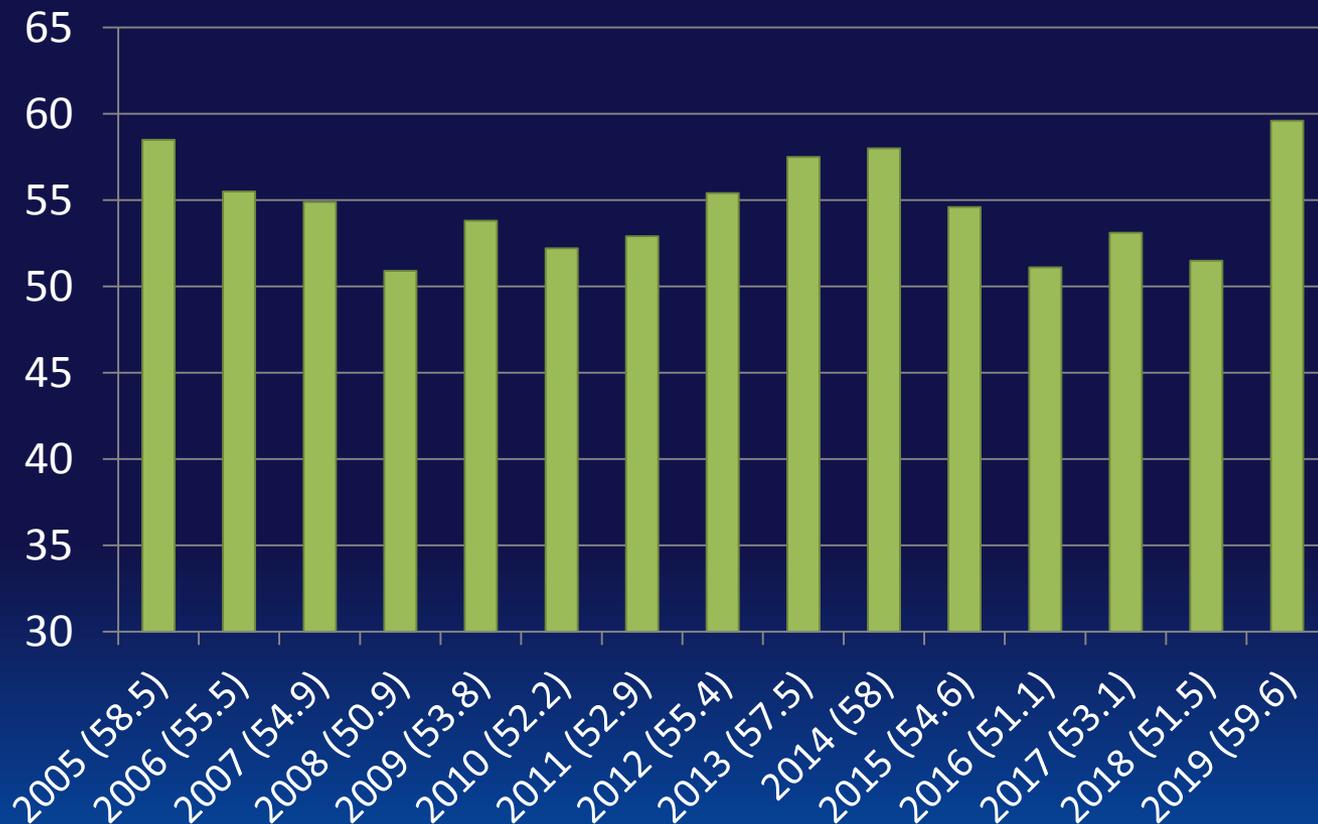
15 Years of NCADC Surveys

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?



■ \$ Millions

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

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North Carolina Aquaculture Technical Assistance NCSU Campus-Based



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Aquaculture Research Personnel



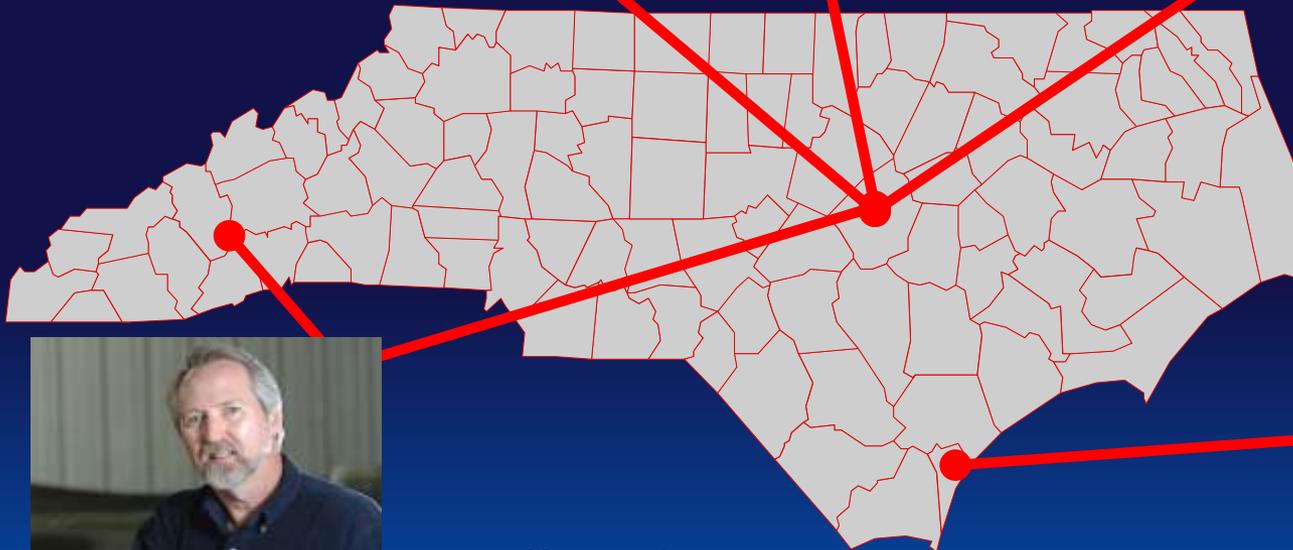
Dr. Russell Borski
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Dr. Jeff Hinshaw
NC State

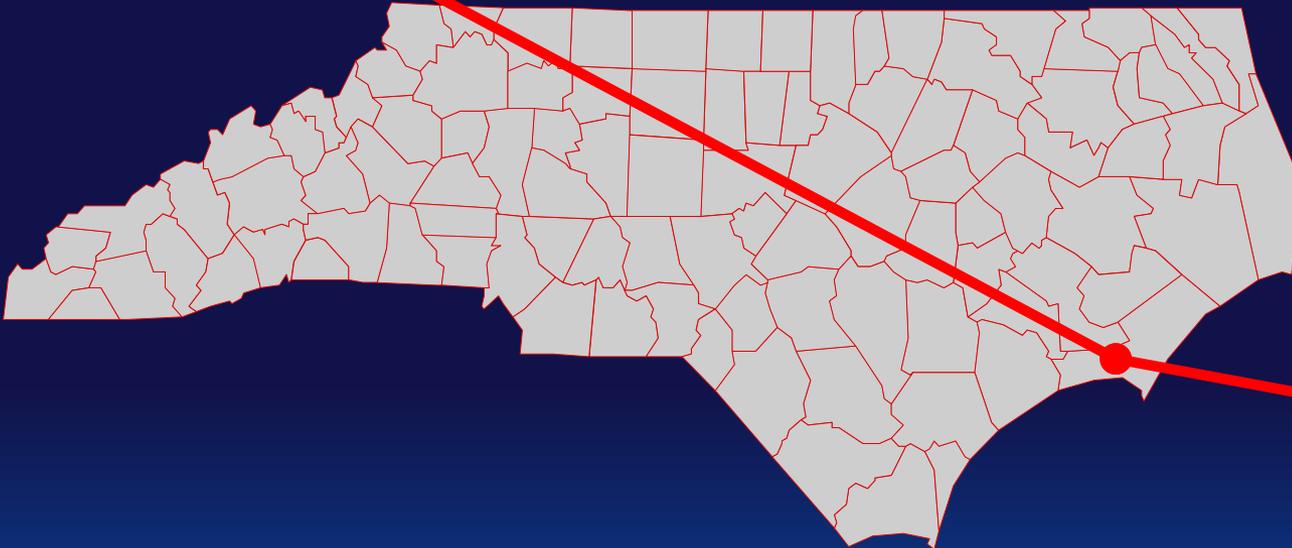


Dr. Wade Watanabe
UNC Wilmington

Aquaculture Research Personnel



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



Marine Aquaculture
Research Center
Ryan Kelly
Extension Assistant

NCSU College of Veterinary Medicine



Dr. Michael Stoskopf



Dr. Jay Levine



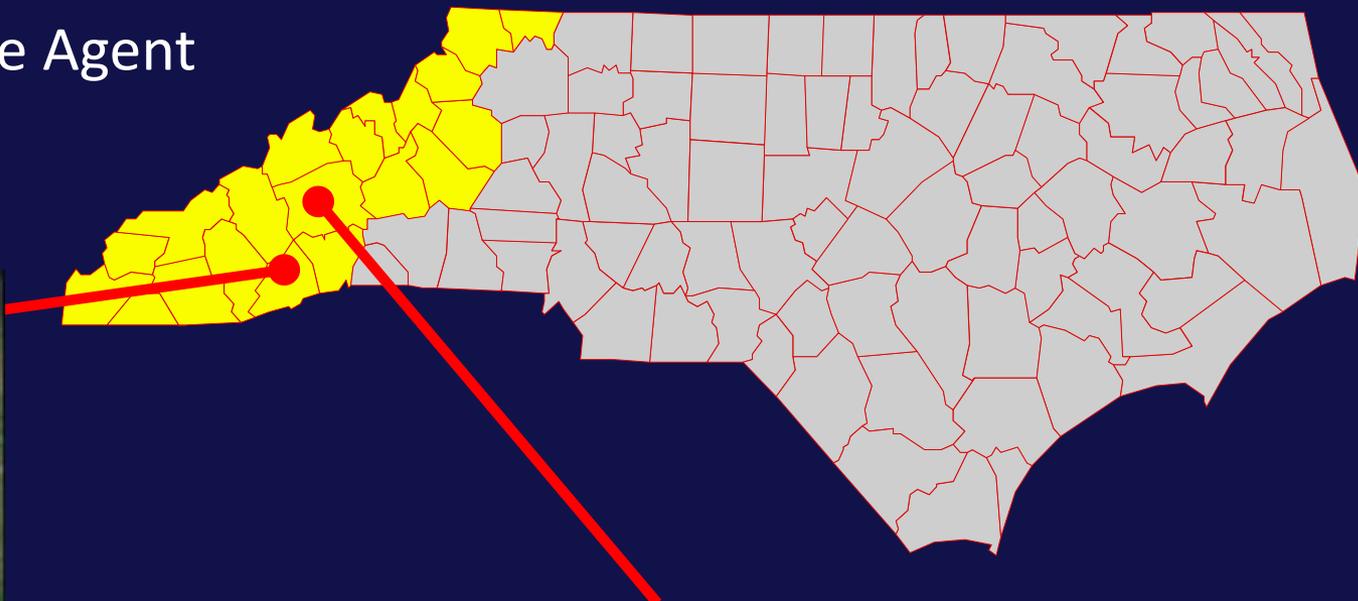
Dr. Greg Lewbart



Dr. Craig Harms

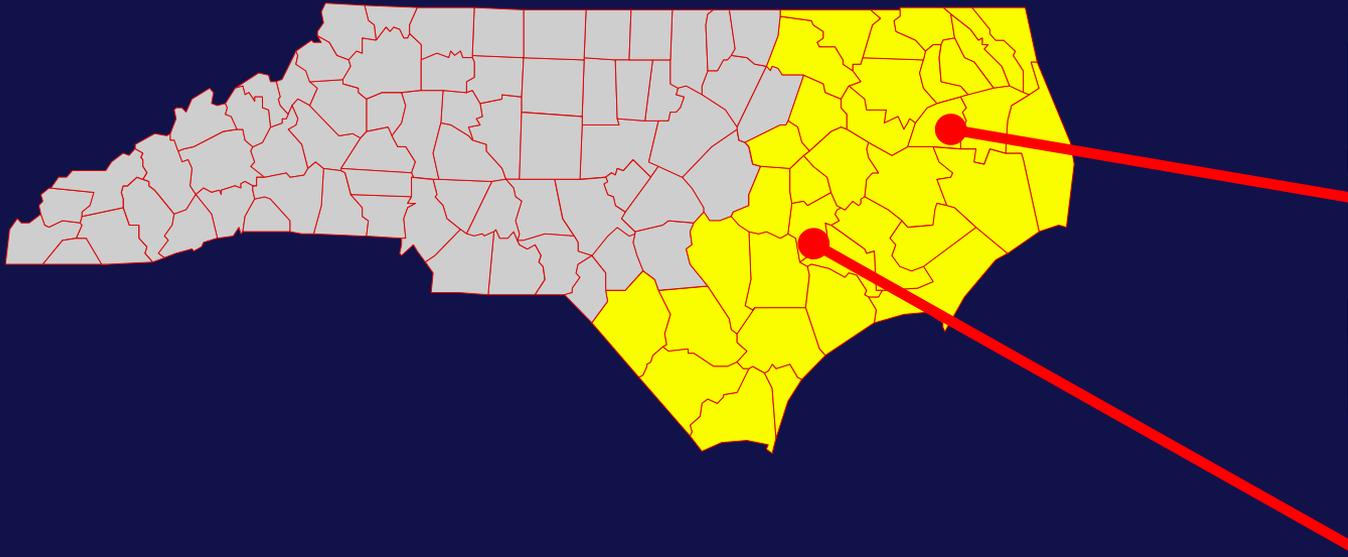
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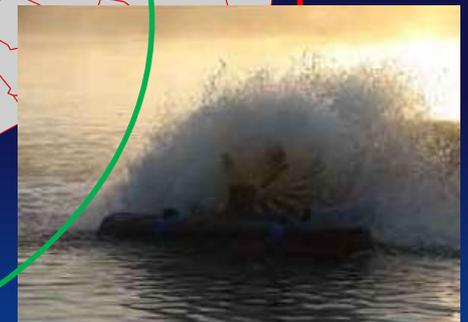
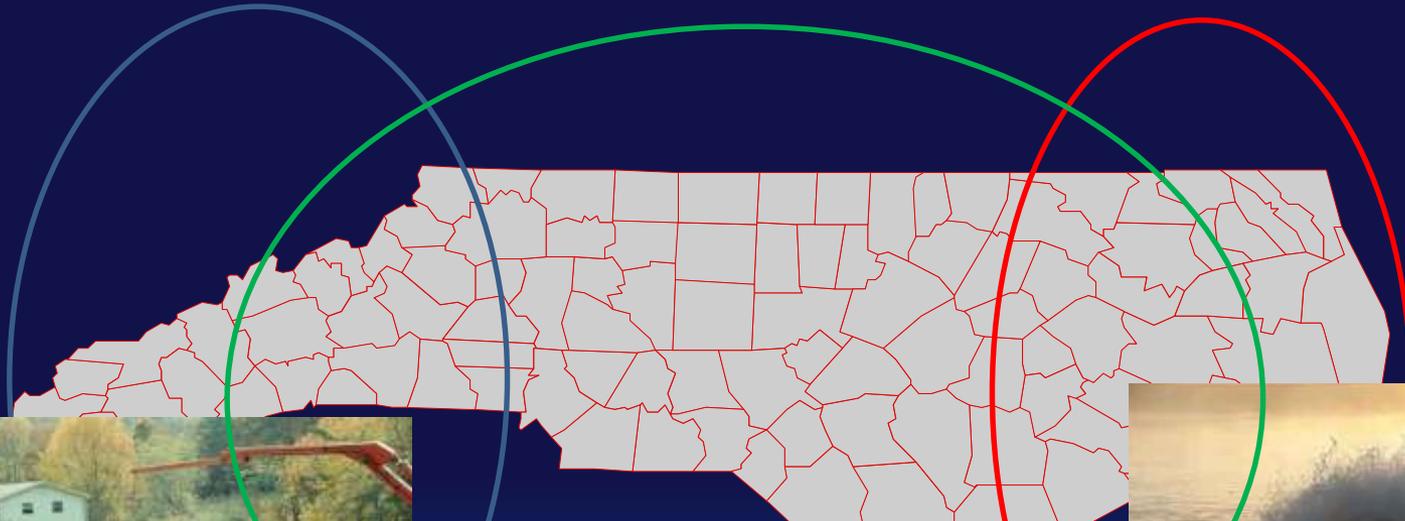


NC Aquaculture - Regional Production

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%)



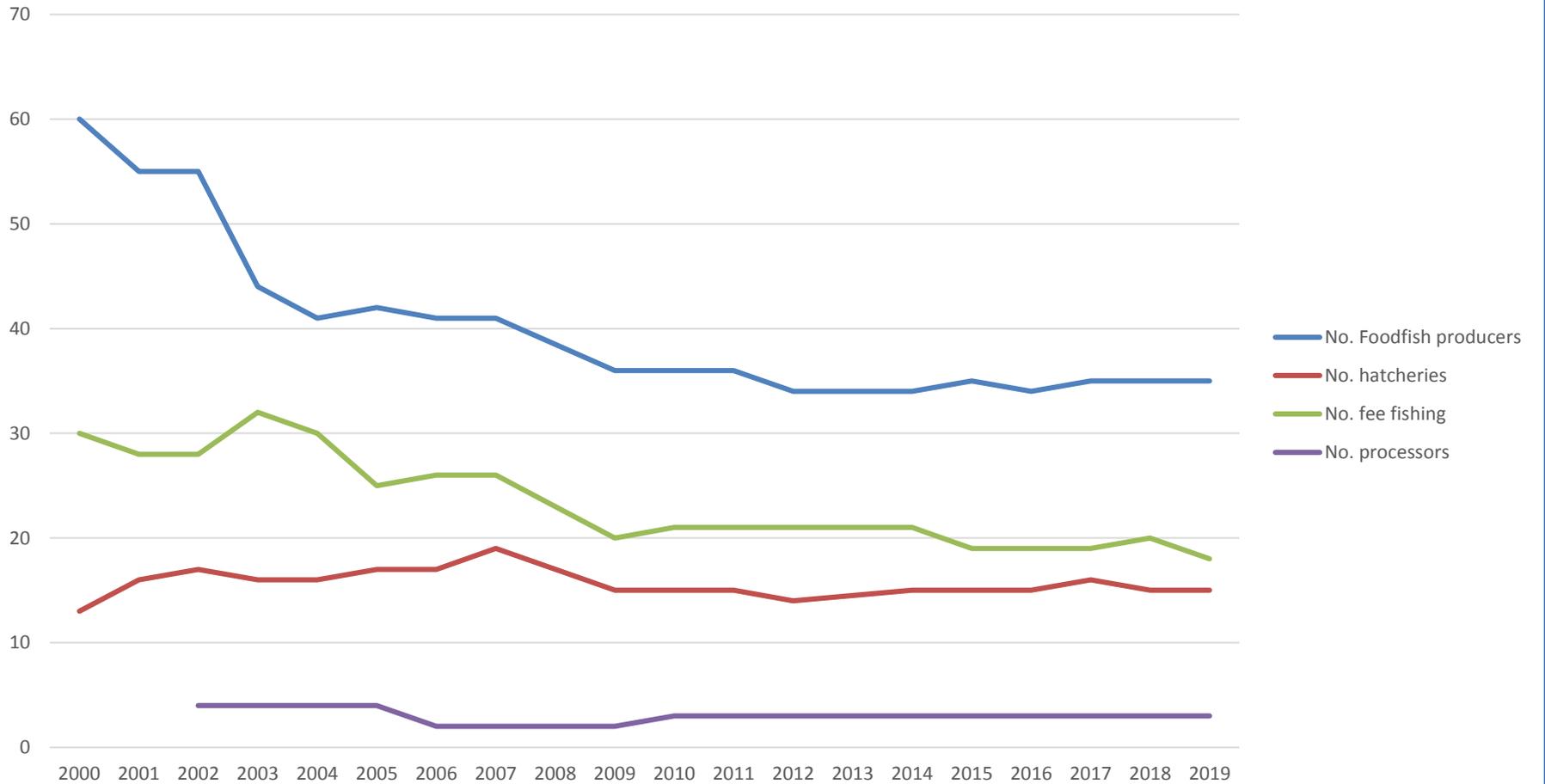
2019 North Carolina Trout Industry

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

Value= \$11,555,100 (5.4%)



Trout Industry Participants



2019 North Carolina Trout Industry

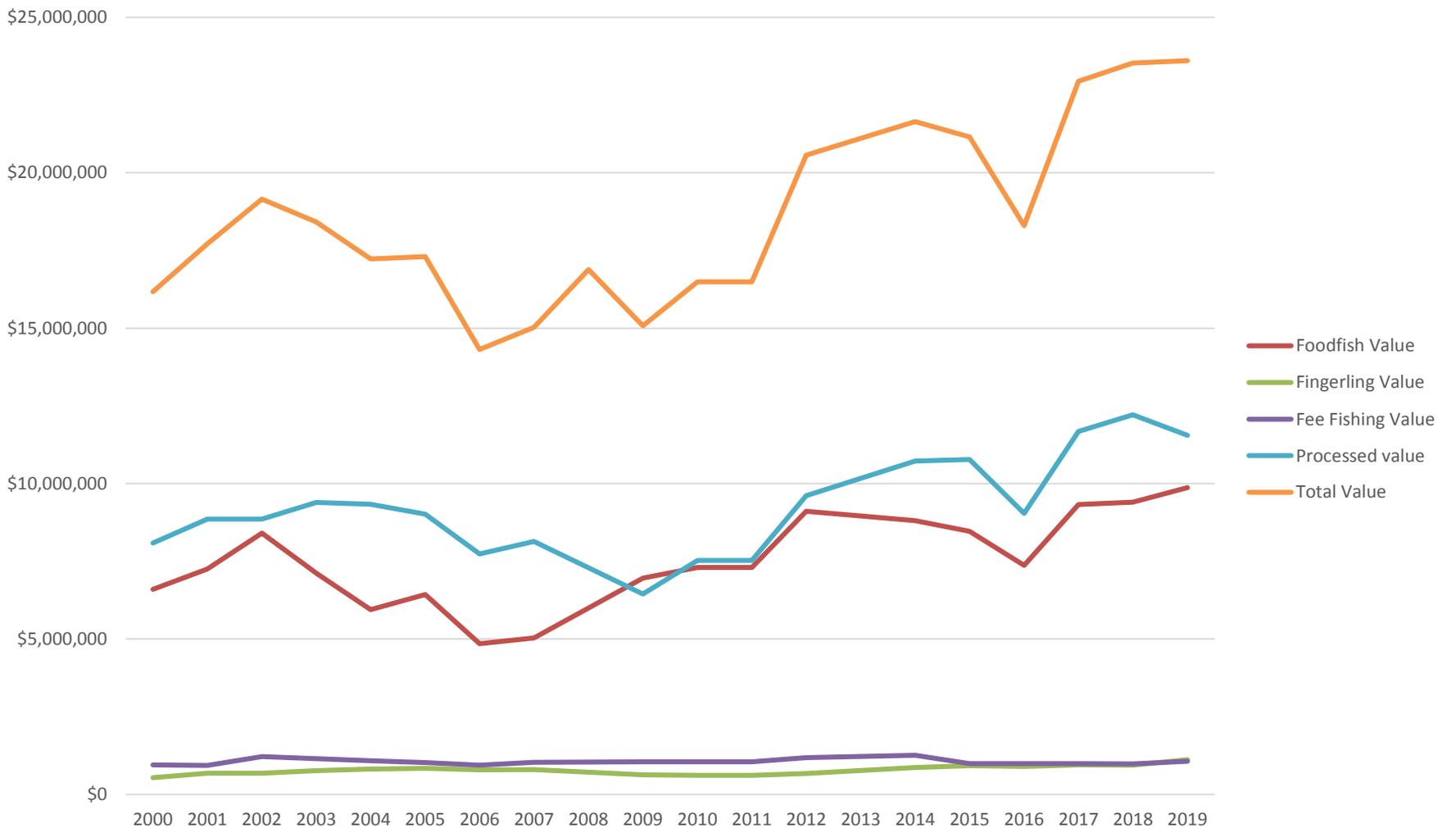
- Trends
 - Industry remains stable
 - Supply below demand
 - High temps in late summer

- Total Combined Value
Farm gate and processing

*** \$23,608,450 (+0.3%)**



Trout Industry Value



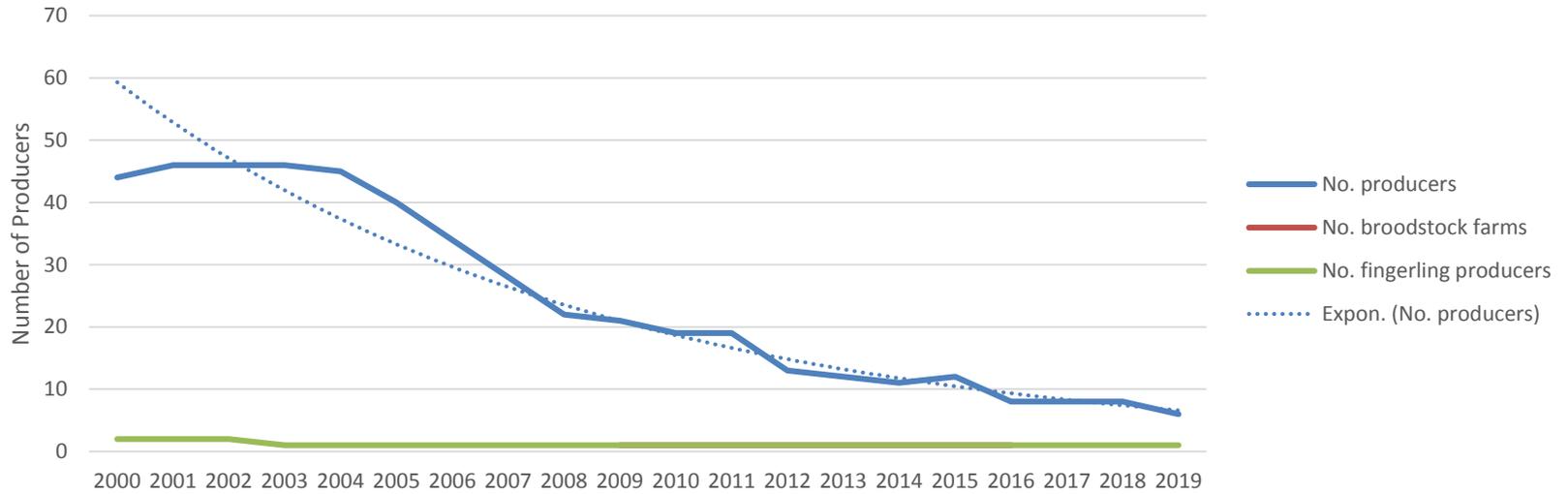
2019 North Carolina Catfish Industry

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

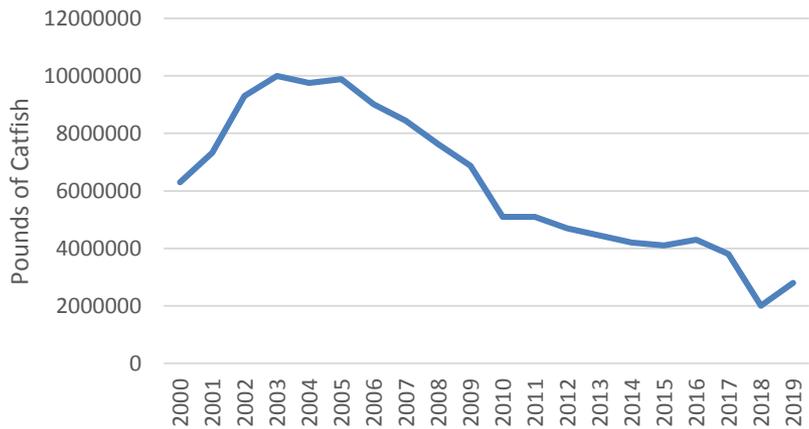


- **Farm gate= \$3,220,000 (+36.8%)**

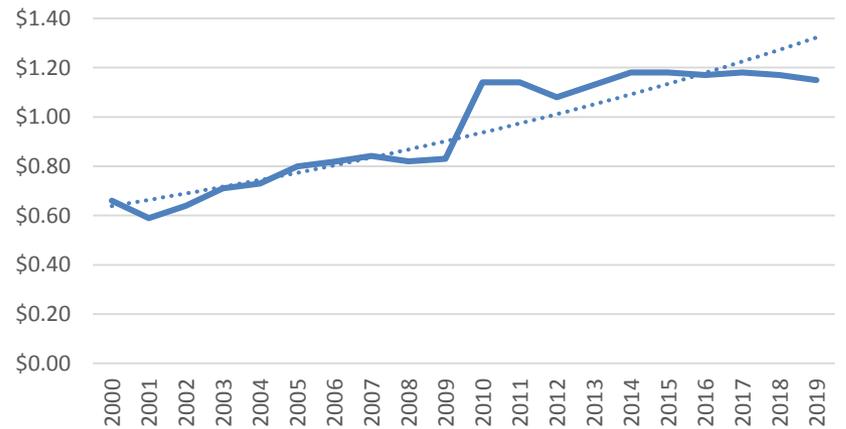
Catfish Industry Producers



Catfish Production (lbs)



Catfish Prices (\$/lb)



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%)

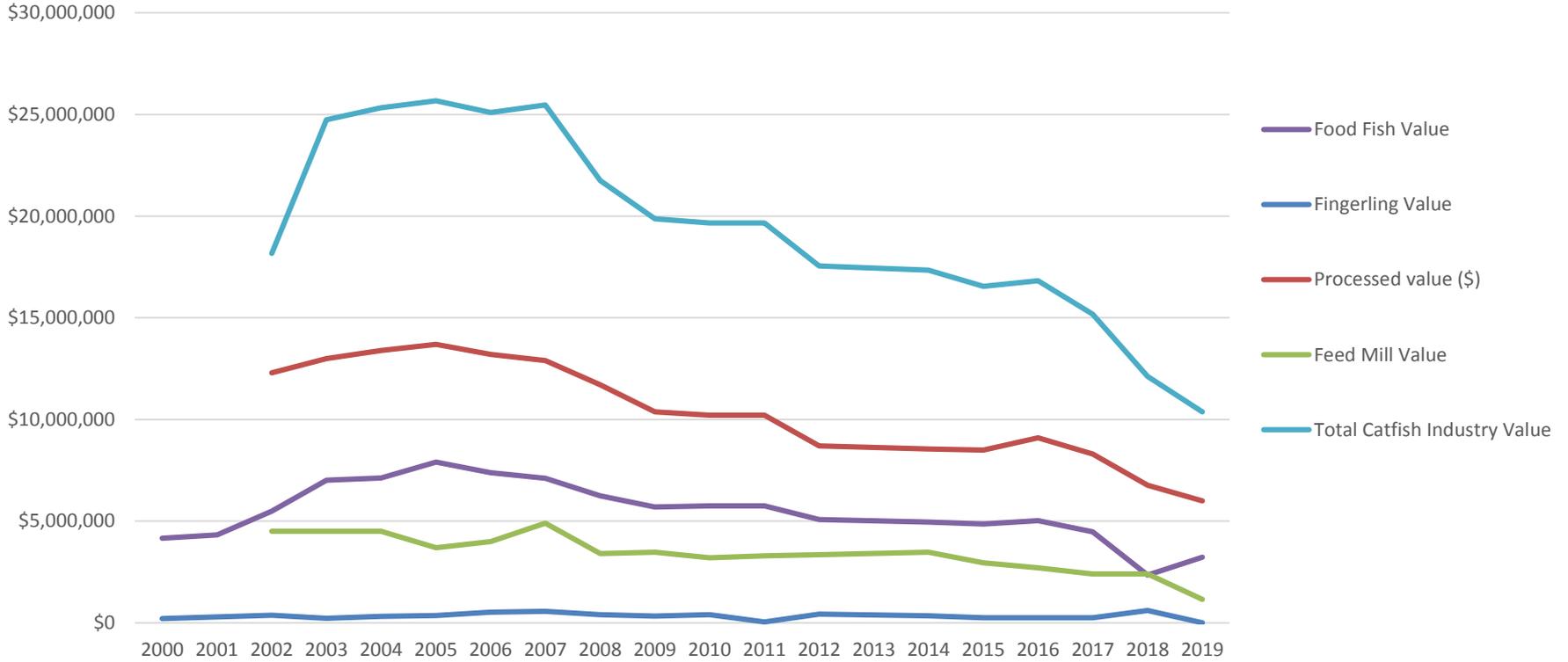


2019 North Carolina Catfish Industry

- 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%)**



Catfish Industry Value



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%)

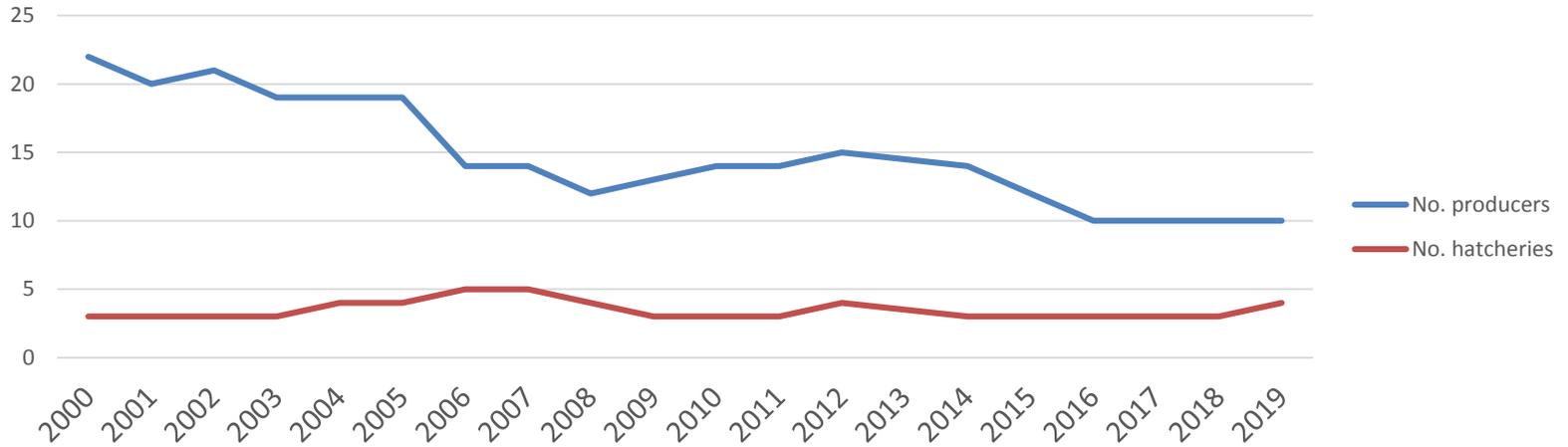
Markets

\$4.34 /lb. (+7.9%)

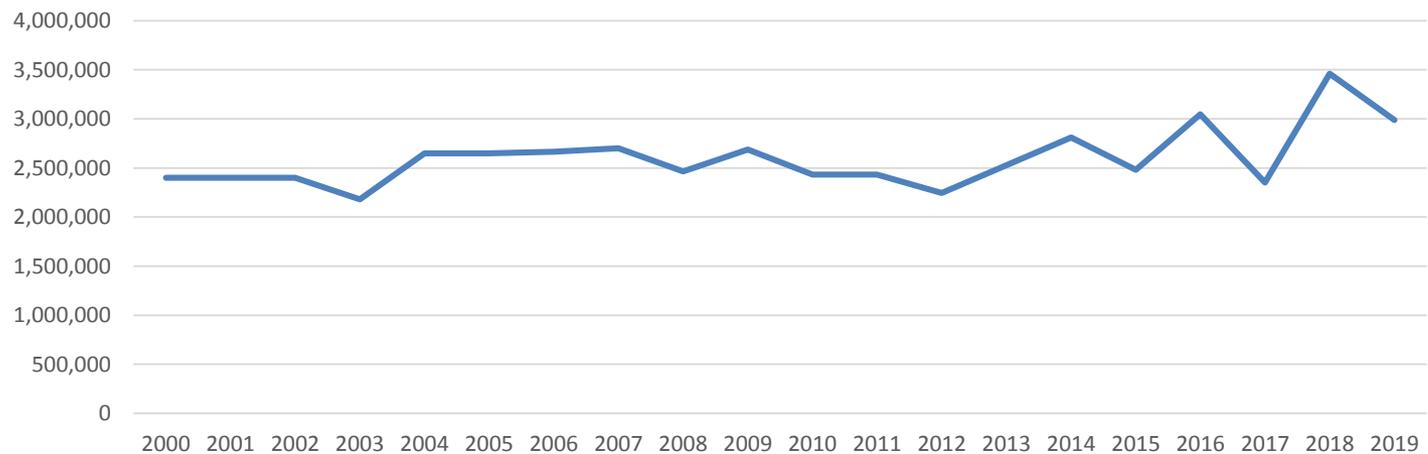
Farm gate= \$13,770,826(-1.0%) *all major farms reporting!



Hybrid Striped Bass Producers



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**

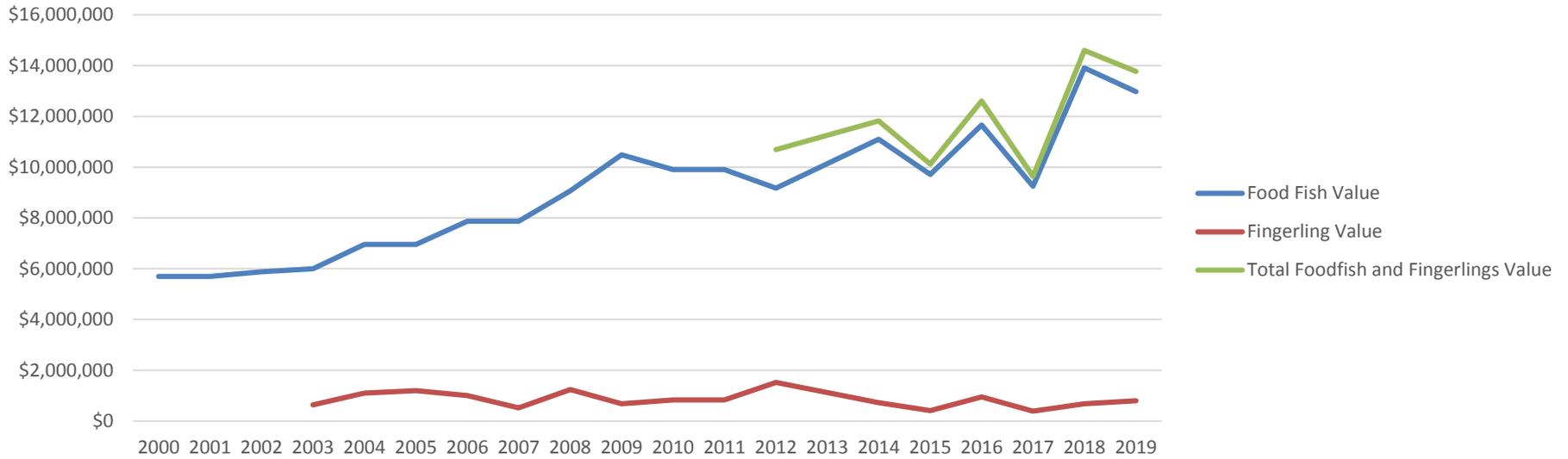
- Live market focused
- Diversity added with LMB on split live haul trips
- Farms increasing production to meet market opportunities
- Freeze during winter hurt production



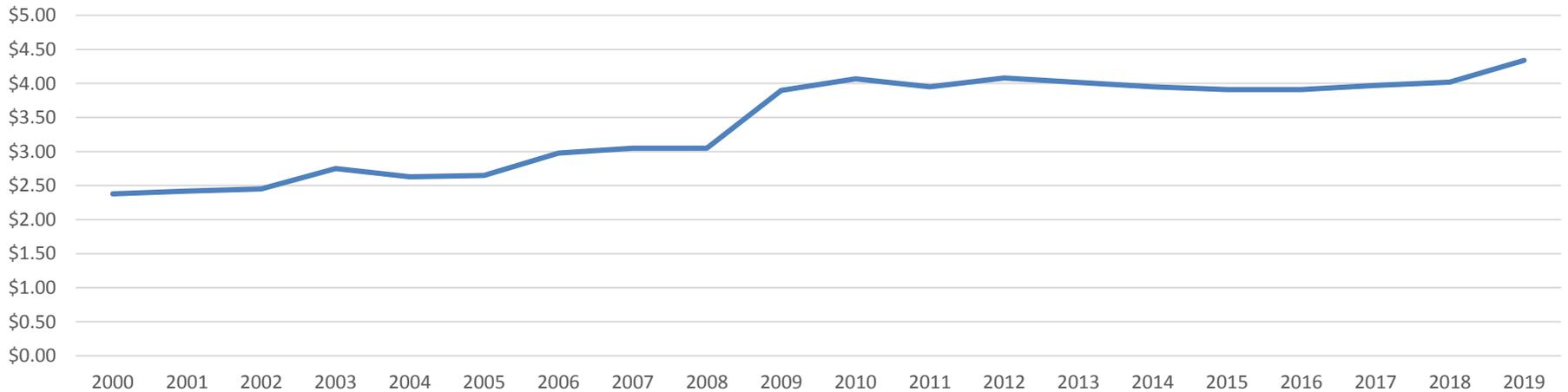
- **Total Combined Value**

Food fish and fingerlings * **\$13,770,826 (-5.6%)**

Hybrid Striped Bass Industry Value



Ave. Price of Hybrid Striped Bass Food Fish



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%)

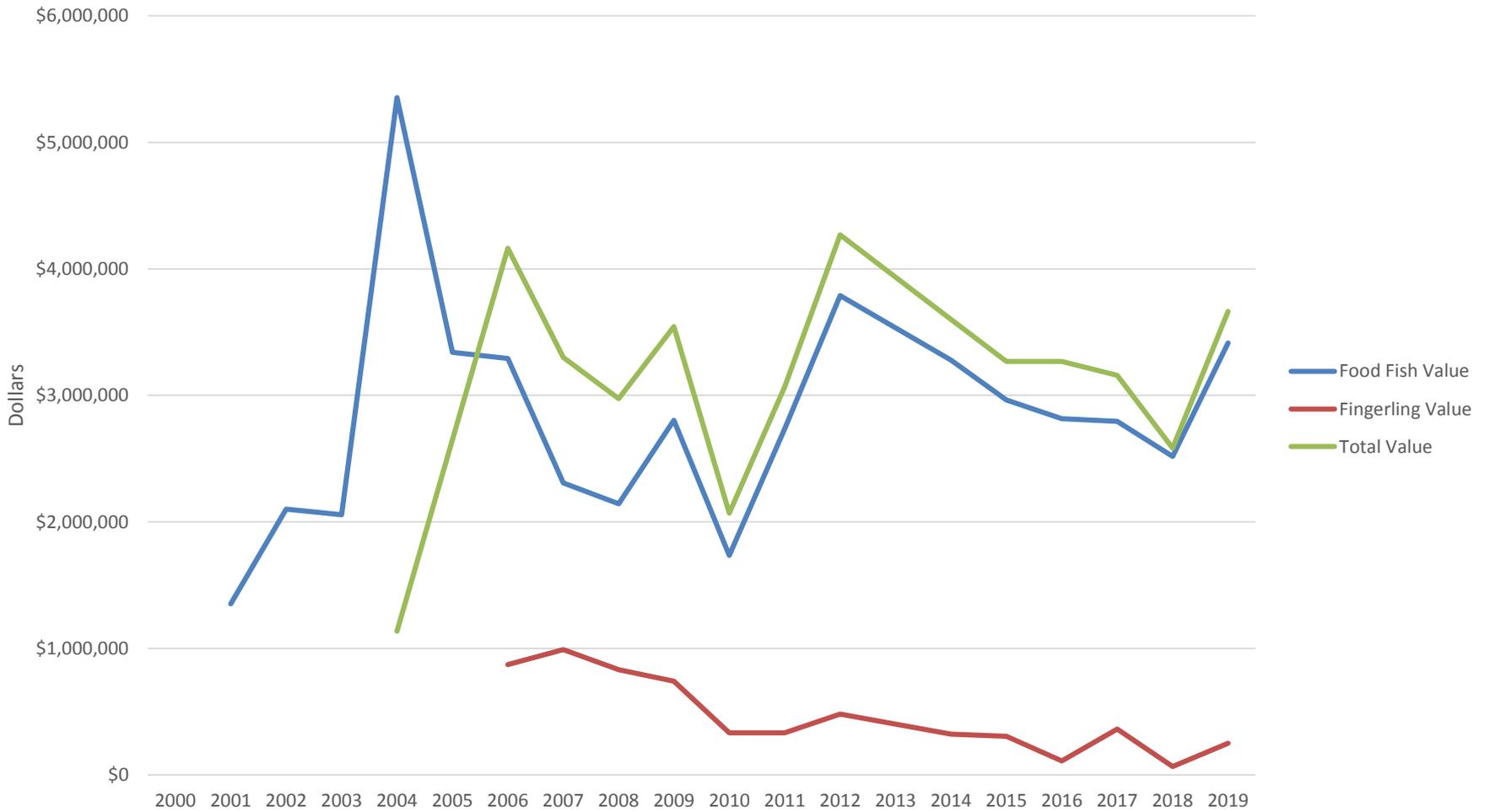


2019 North Carolina Tilapia Industry

- 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%)**



Tilapia Value



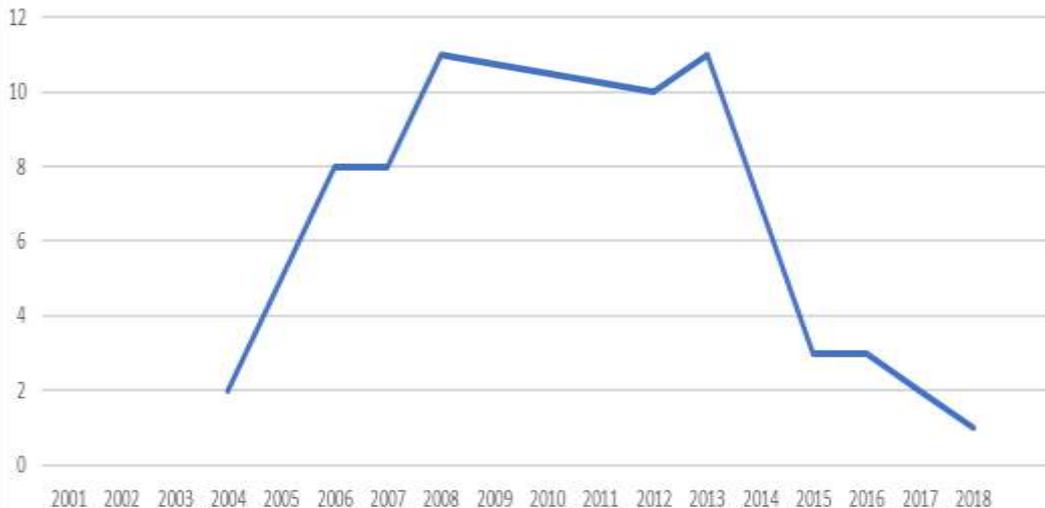
2019 NC Freshwater Prawn Industry

1 active producer

- Co-op no longer selling product
- Cheap imports have severely impacted markets
- Opportunities with pondside sales



Number of Prawn Producers



2019 North Carolina Crawfish Industry

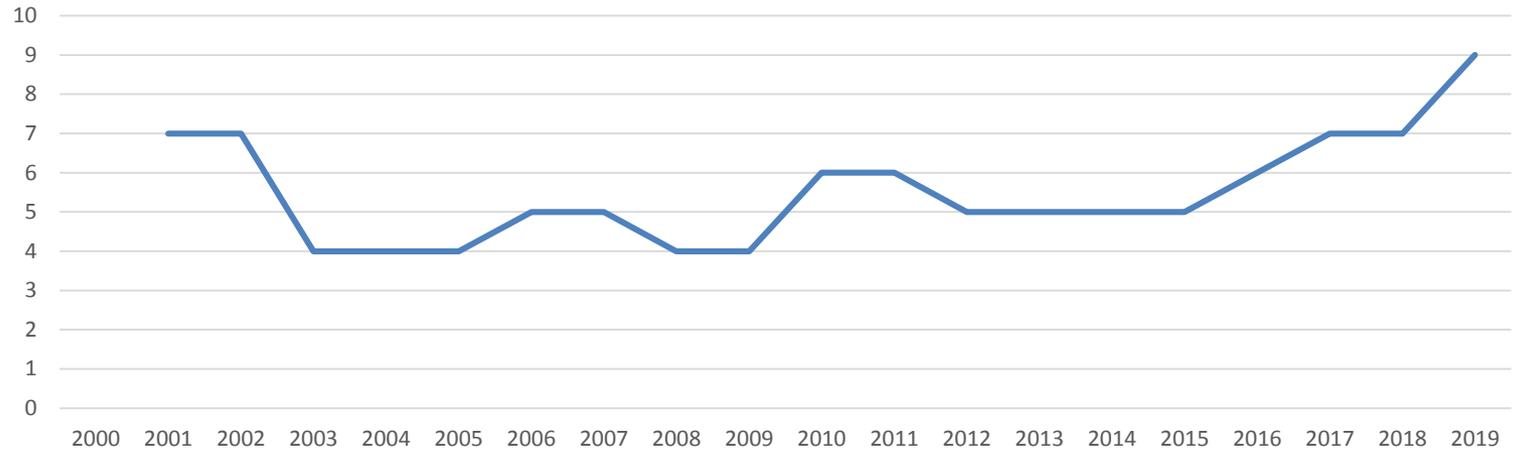
- 9 active growers (+2)
- 10,879 lbs. produced (-27%)
- \$4.82/lb.(wt. avg.)
- Farm gate=
\$52,437 (-27%)

-Winter freeze hurt production.

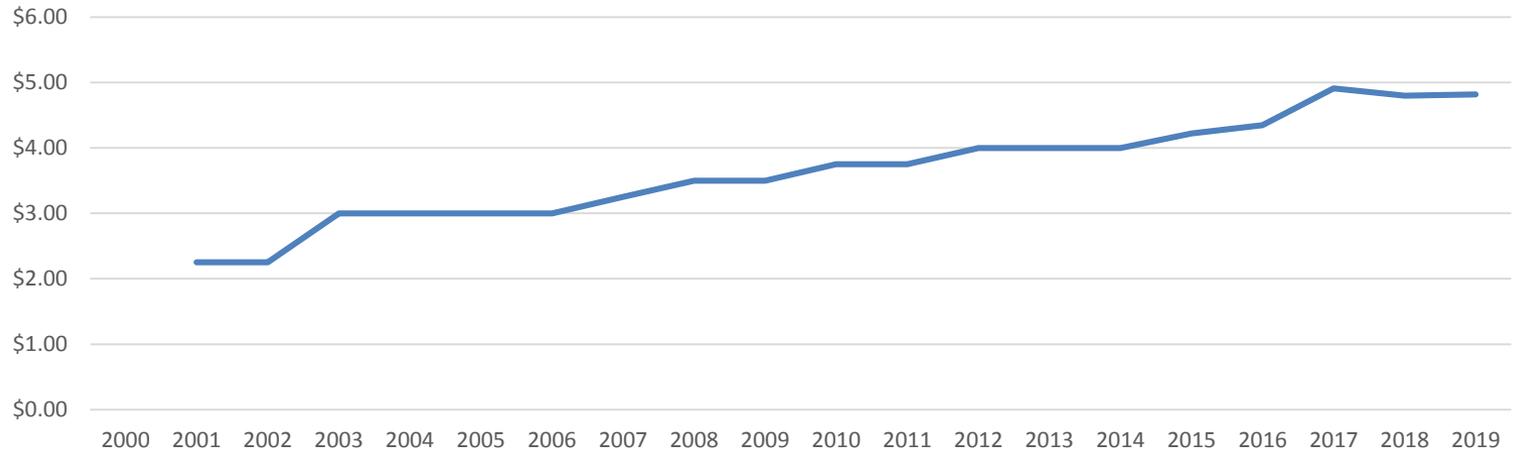
-Anticipating more producers for next year.



Number of Crawfish Producers



Crawfish Prices (\$/lb.)



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



2019 North Carolina Sturgeon Production

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.



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NC Aquaculture Industry – State Update – Shellfish 2020 NC Aquaculture Development Conference



Frank Lopez, Extension Director

NC Products



Eastern oysters

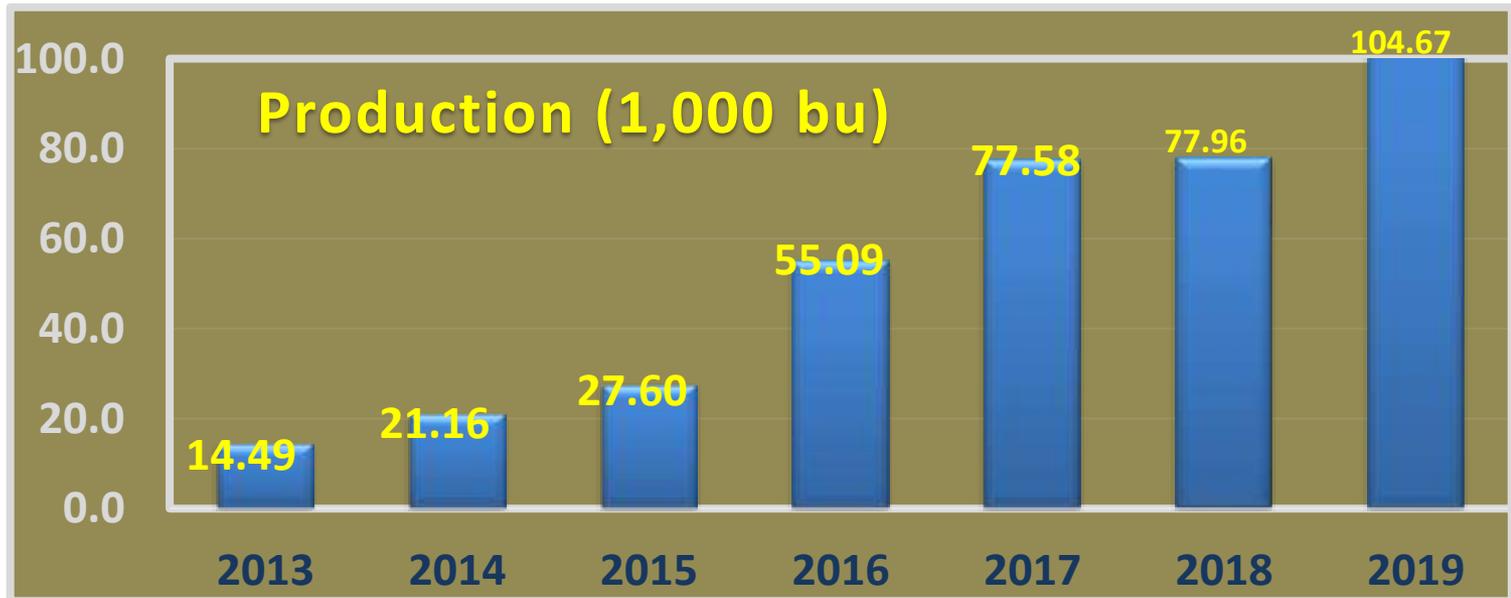


Soft shell blue crabs



Hard clams

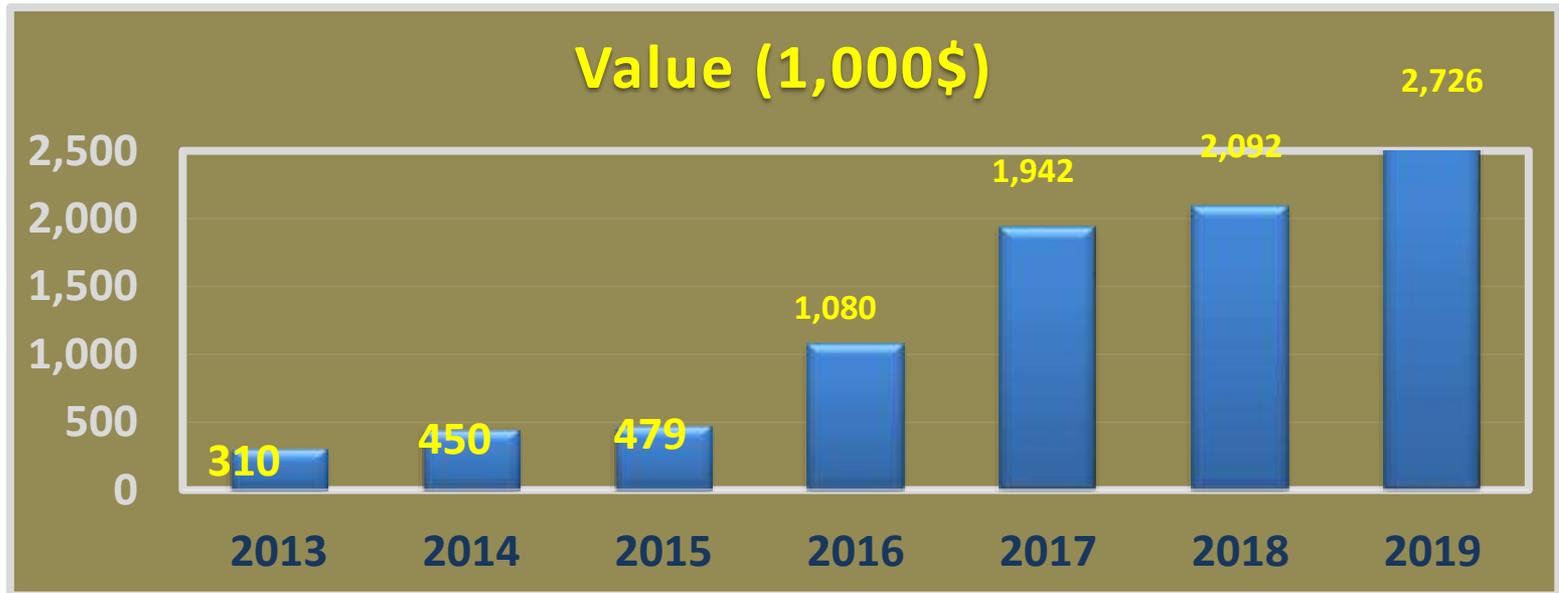
2019 NC Farmed Oyster production



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

2019 data is preliminary

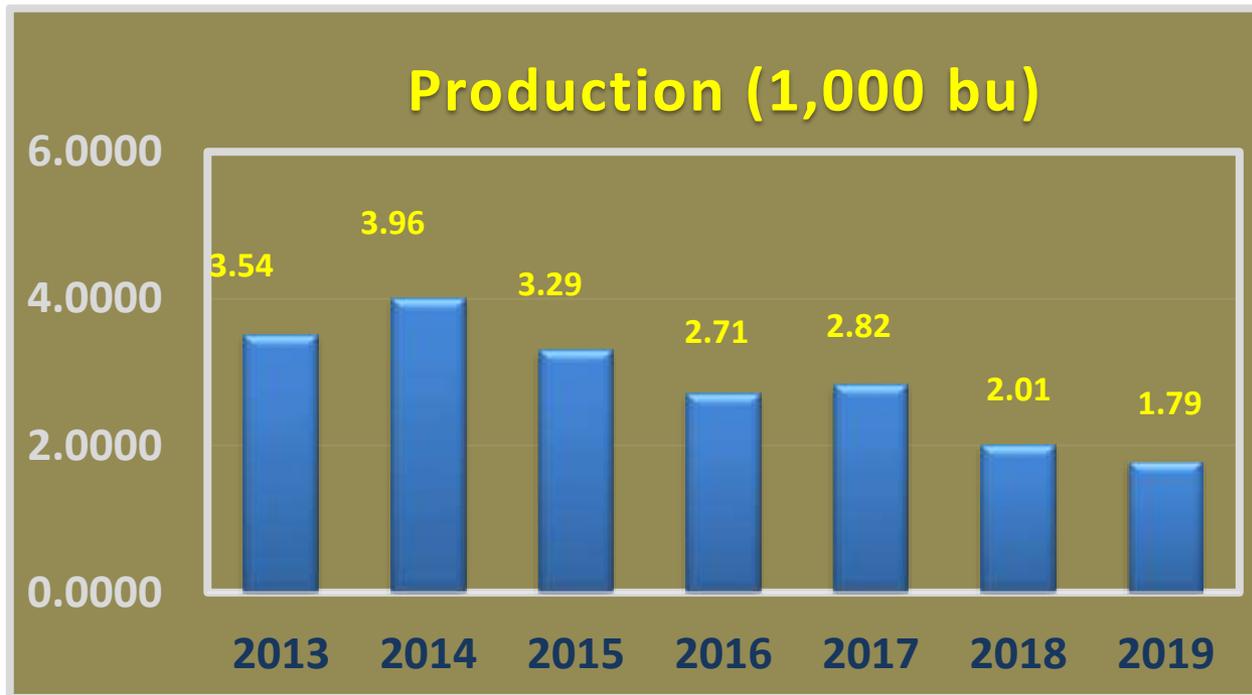
2019 NC Farmed Oyster value



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

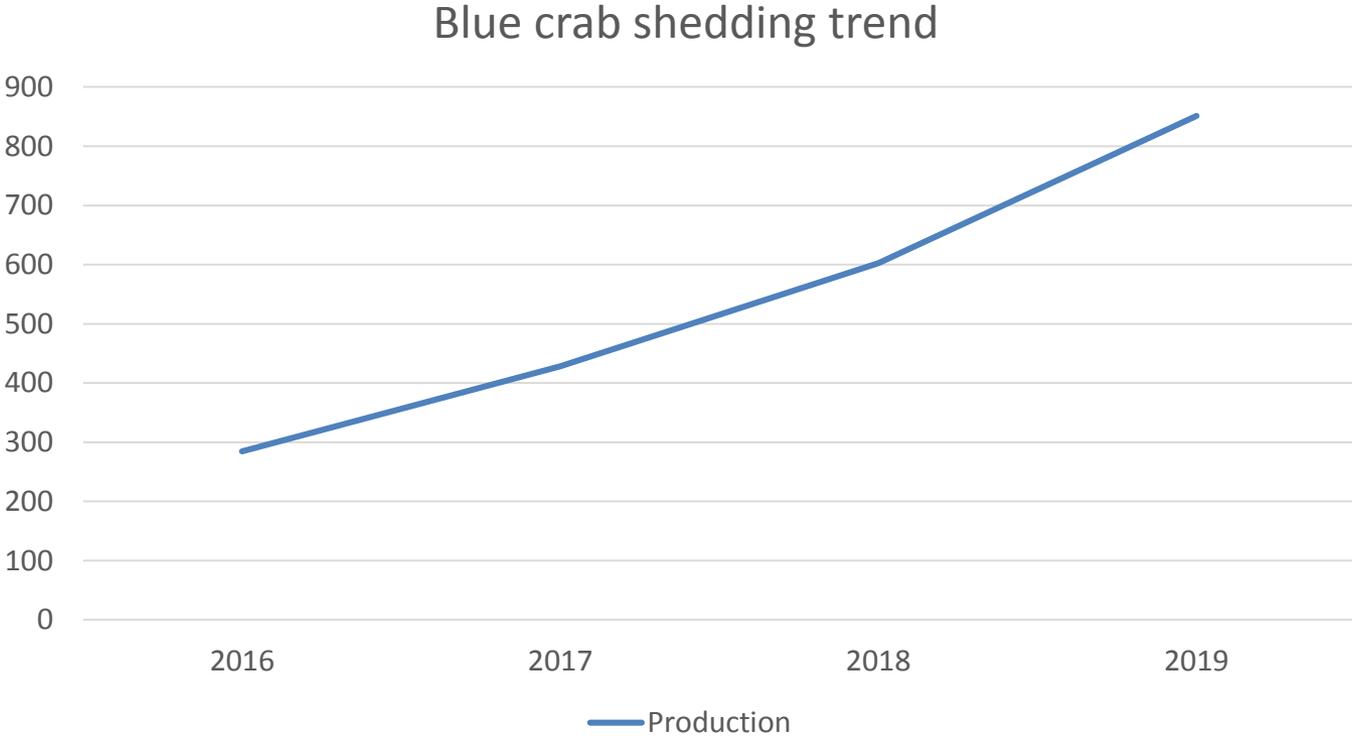
Production
850,992 lbs.

Value
\$2.22 million



2019 data is preliminary

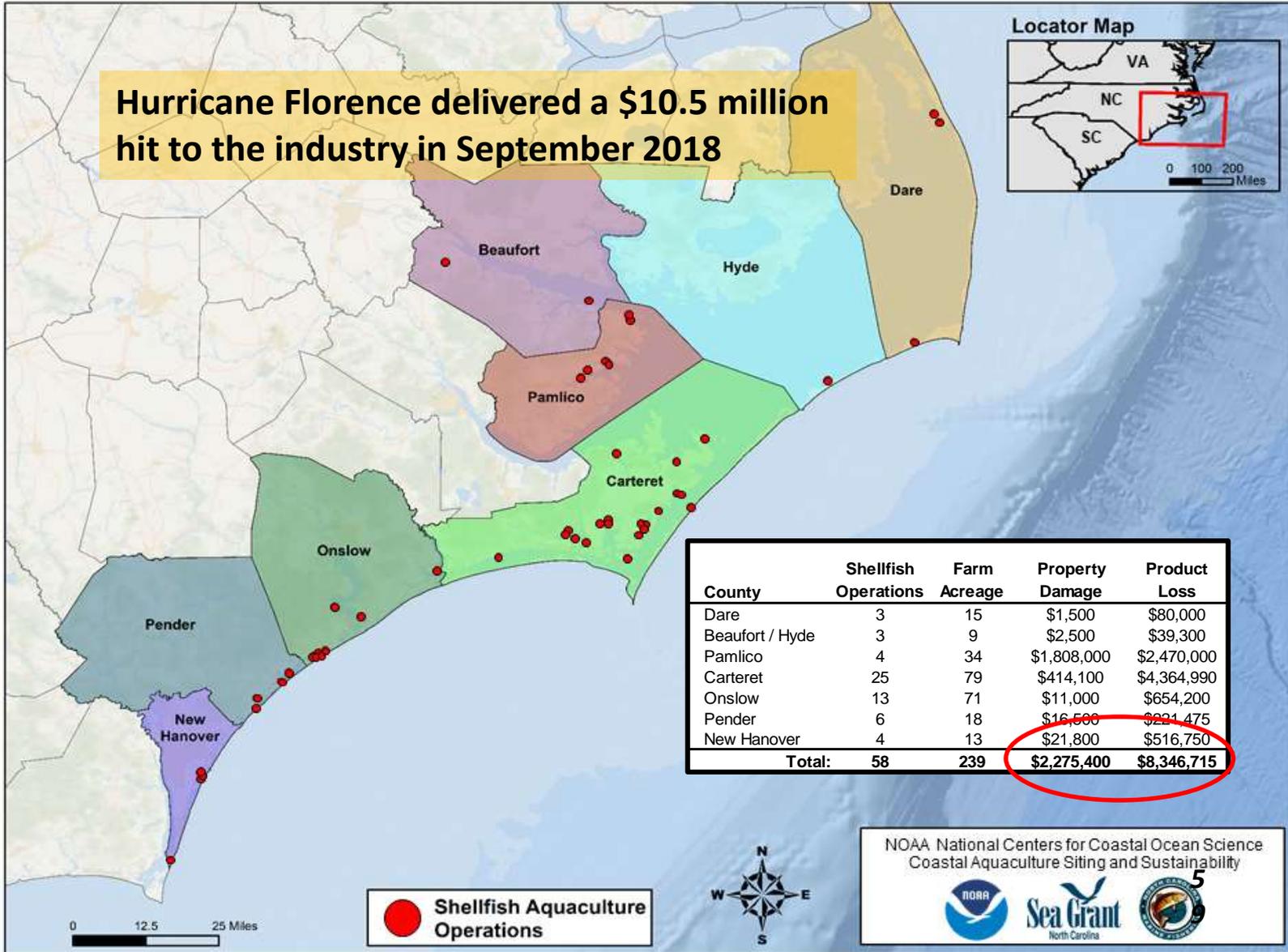
2019 NC Blue Crab Shedding production & value



2019 data is preliminary

Hurricane Florence delivered a \$10.5 million hit to the industry in September 2018

Locator Map



County	Shellfish Operations	Farm Acreage	Property Damage	Product Loss
Dare	3	15	\$1,500	\$80,000
Beaufort / Hyde	3	9	\$2,500	\$39,300
Pamlico	4	34	\$1,808,000	\$2,470,000
Carteret	25	79	\$414,100	\$4,364,990
Onslow	13	71	\$11,000	\$654,200
Pender	6	18	\$16,500	\$224,475
New Hanover	4	13	\$21,800	\$516,750
Total:	58	239	\$2,275,400	\$8,346,715

NOAA National Centers for Coastal Ocean Science
Coastal Aquaculture Siting and Sustainability





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?

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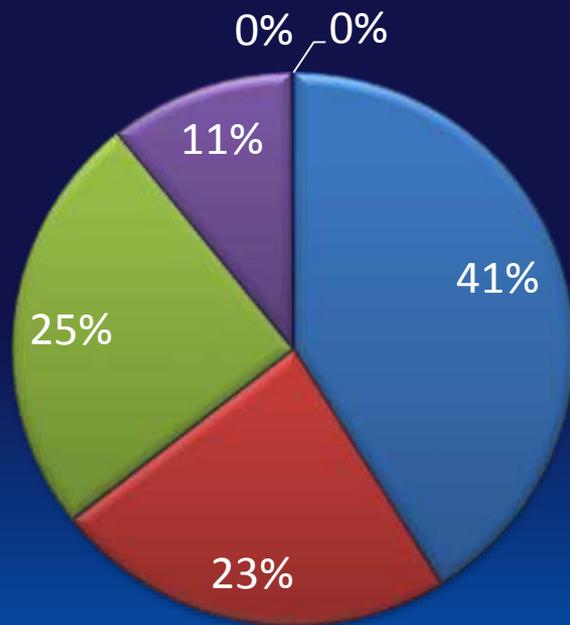


got to be **NC** AGRICULTURE



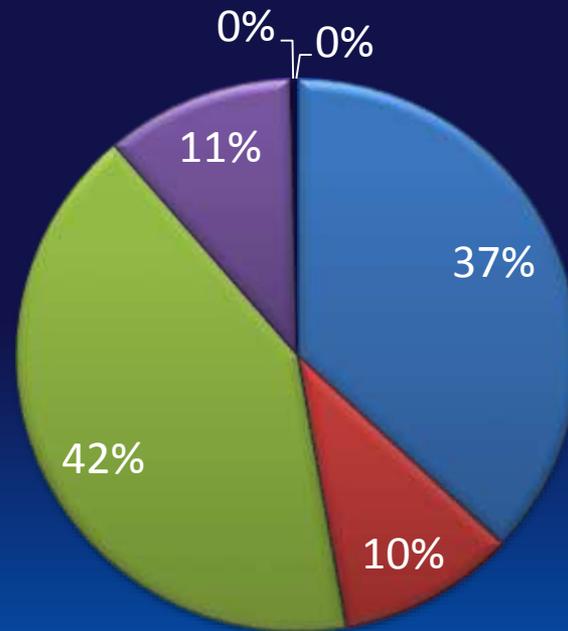
2019 North Carolina Aquaculture Industry Value Summary - Freshwater Species (food fish)

% of Pounds from Food Fish Sold
12,230,799 lbs.



- Trout
- Catfish
- HSB
- Tilapia
- LMB
- Crawfish

% of Dollar Value from Farm Gate Food Fish Sales
\$29,126,340

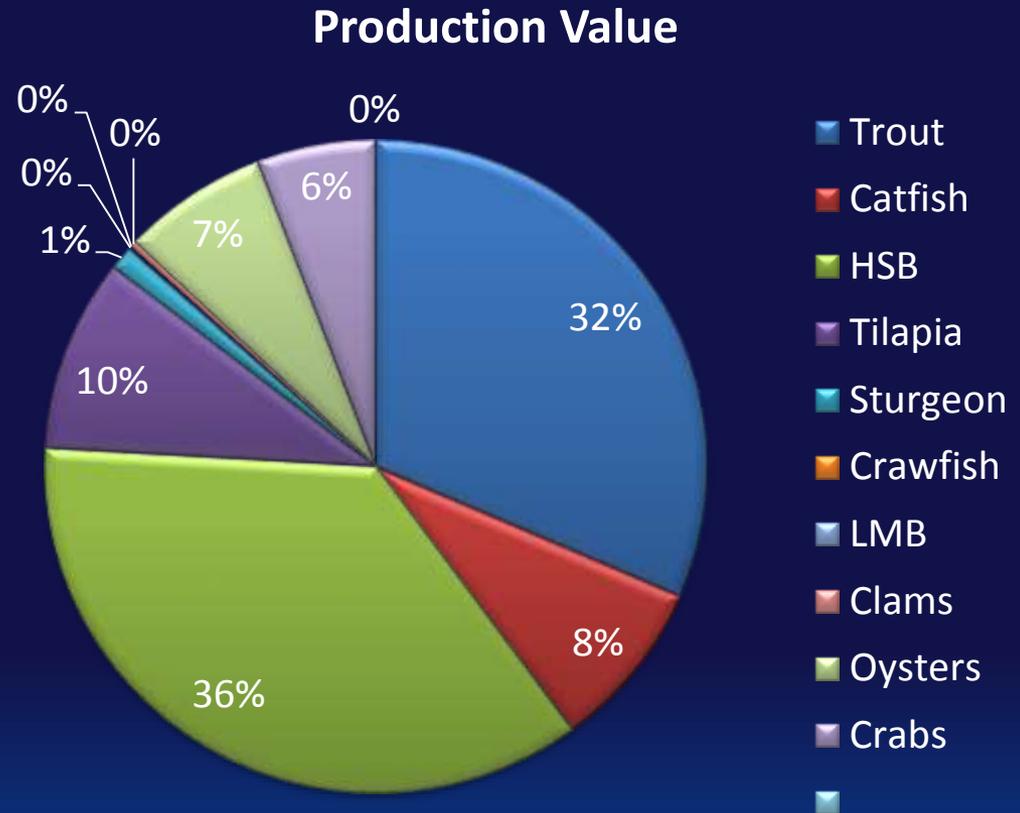


- Trout
- Catfish
- HSB
- Tilapia
- LMB
- Crawfish

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%)**

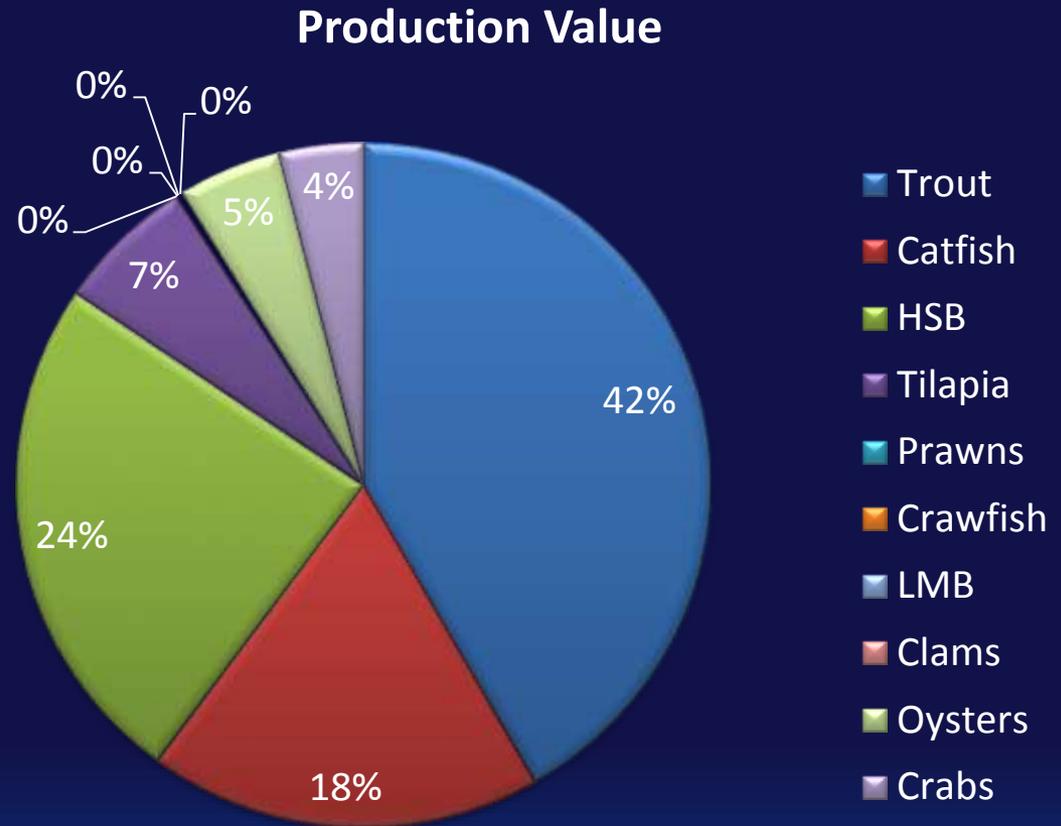


2019 NC Aquaculture Industry Summary

- Total Value

Includes :

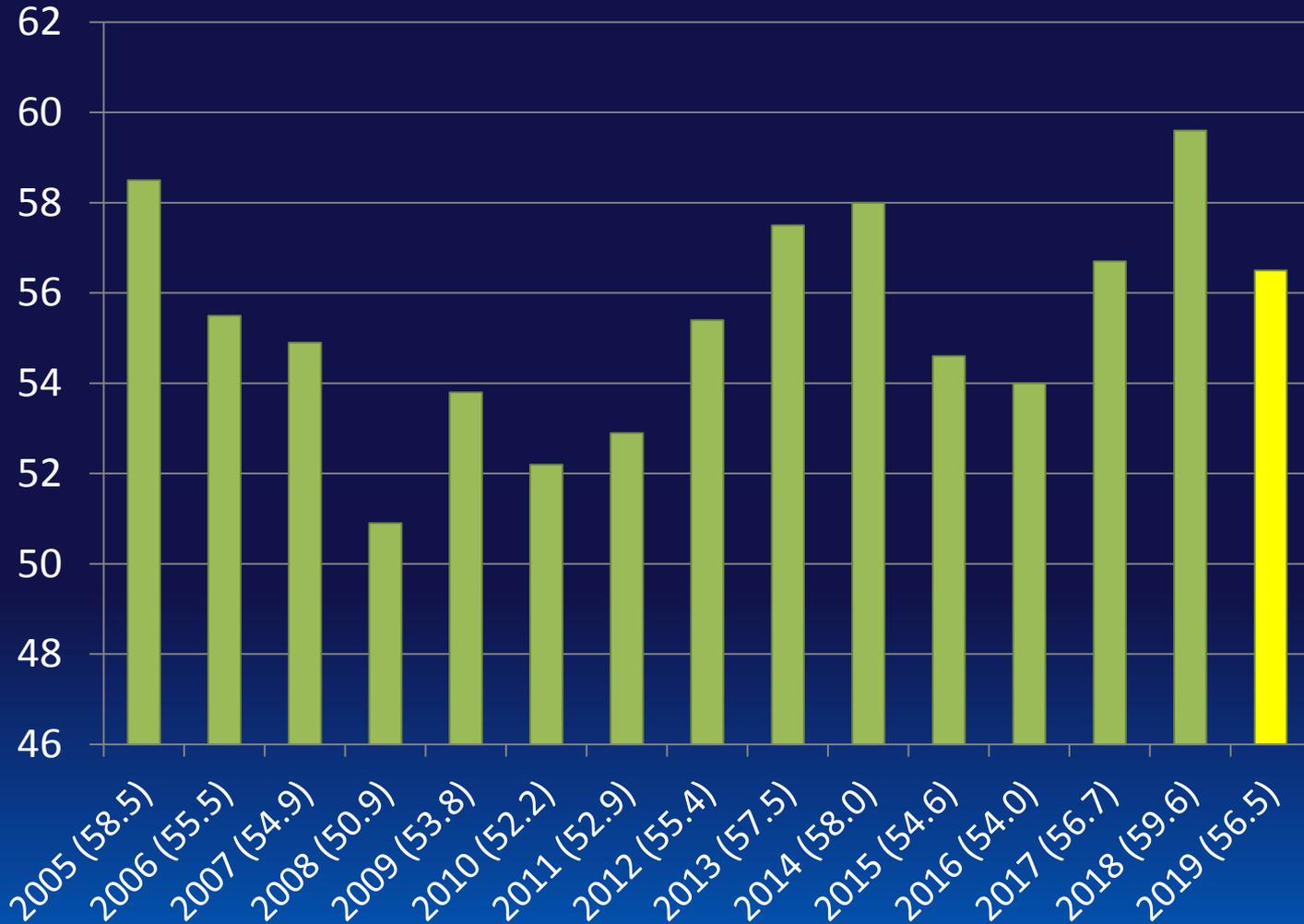
- Production farm gate
- Processed product
- Feed produced



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 NCADC State Update Presentations

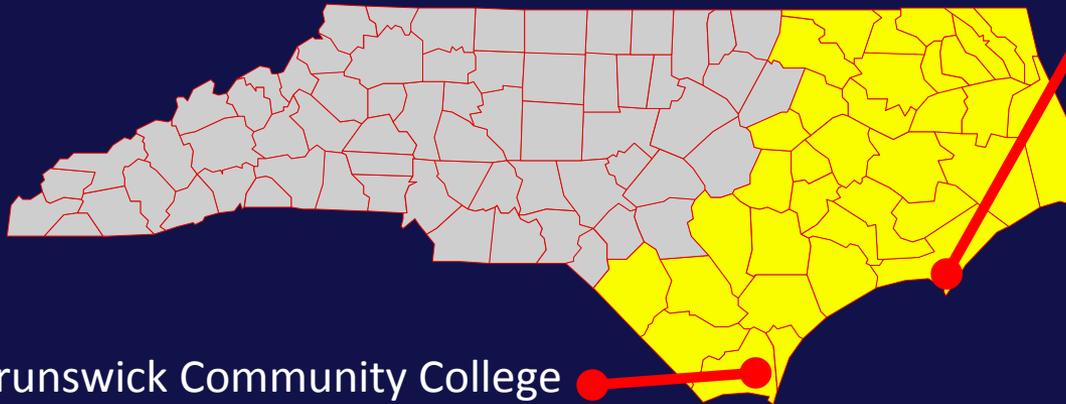


What will the next 10 years hold?

What ways can we help it grow?

Aquaculture Education in North Carolina

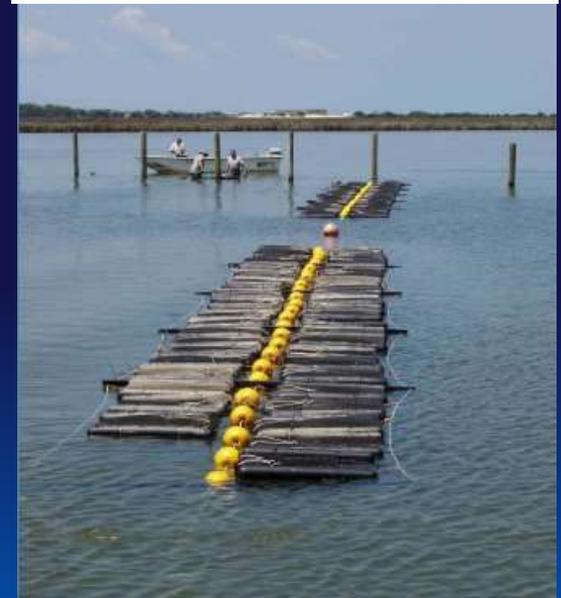
- NC Community College System



Carteret Community College
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Brunswick Community College
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NC State, Raleigh



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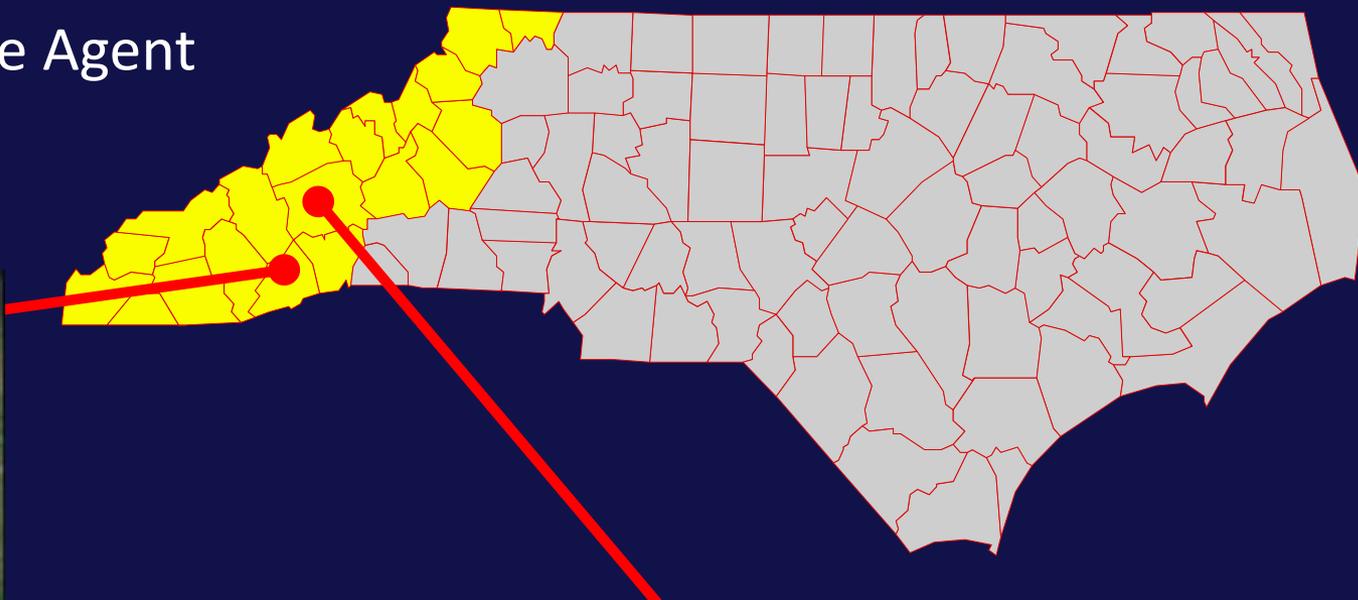
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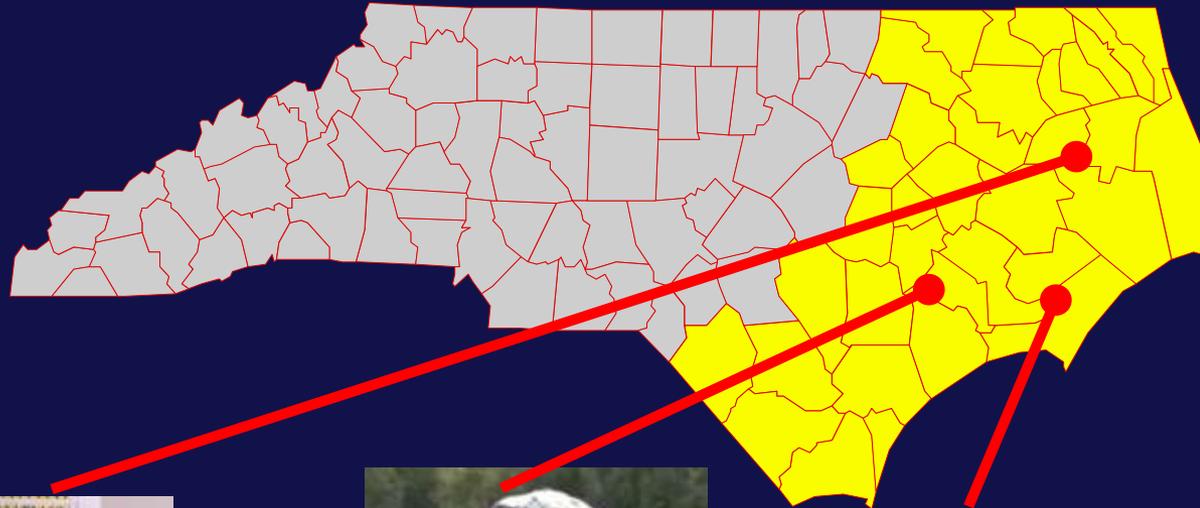
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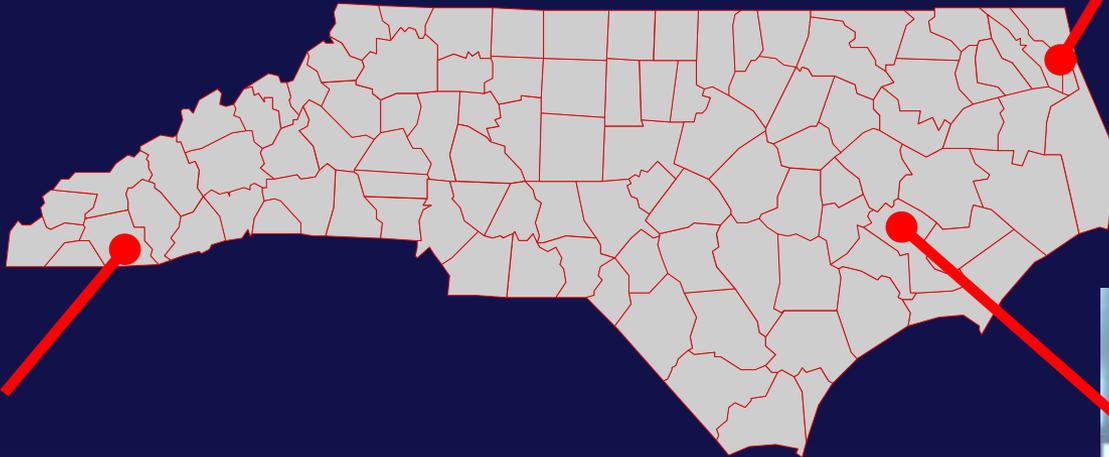


NC Sea Grant
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Business Planning, Permitting & Marketing Assistance for North Carolina Aquaculture

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Pete Anderson
Aquaculture Consultant
NCAA Representative
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YOUR Aquaculture Associations – Join them!





2020 NC Aquaculture Development Conference



Thank you!

*For making this year another
successful conference!*