

COMMENTARY ON COVID-19 AND THE FOOD SYSTEM

New survey shows COVID-19's impacts on South Carolina oyster farmers and offers hope for recovery

JAFSCD
Responds to
the COVID-19
Pandemic



Steven Richards ^{a *}
Clemson Cooperative Extension

Marzieh Motallebi ^b
Baruch Institute of Coastal Ecology and Forest Science

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Introduction

This article is a summary of six months of research on how COVID-19 has affected South Carolina oyster aquaculture farms. This research has four goals: to better understand oyster consumption and purchases, to assess the impact of COVID-19 restaurant closures and reduced seating capacity on oyster consumption, to forecast oyster consumption trends, and to discover methods for marketing oysters for home consumption.

The first two goals were researched at the height of the COVID-19 shutdown and were documented in three Clemson University Land Grant Press articles: “Impacts of COVID-19 Restaurant Closures on

^{a *} *Corresponding author:* Steven Richards, Agribusiness Master Extension Associate, Clemson Cooperative Extension; 18 John Galt Road; Beaufort, South Carolina 29906 USA; +1-843-473-6024; Stricha@clemson.edu

^b Marzieh Motallebi, Assistant Professor, Forestry and Environmental Conservation Department, Baruch Institute of Coastal Ecology and Forest Science; P. O. Box 596; Georgetown, SC 29442 USA; +1-843-546-1013, Ext 223; mmotall@clemson.edu

Author Note

Co-principal investigators from Clemson University are Dr. Lori Dickes, Dr. Keith Walters, Dr. Rob Carey, Dr. Kenneth Robinson, and Jack Whetstone, Clemson University. Special thanks to Clemson graduate student David Cheplick and Matt Gorstein and Graham Gaines of South Carolina Sea Grant for their help reviewing survey questions.

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South Carolina's Shellfish Industry" (Richards, 2020a), "The South Carolina Shellfish Industry Faces a Challenging Recovery After COVID-19" (Richards, 2020b), and "The Post COVID-19 Restaurant Recovery May Take A While" (Richards, 2020c).

While performing this research, it was realized that more detailed consumer information was needed to accurately measure oyster consumption trends. Past consumer studies rarely separate oyster consumer statistics from general seafood or shellfish categories. And shellfish consumer surveys are easily skewed by shrimp consumption, which accounts for 70% of all shellfish eaten in the U.S. (U.S. Department of Agriculture Economic Research Service [USDA ERS], 2019), and of which 92% is imported (NOAA Fisheries of the United States, 2017).

Oyster Consumption: What We Knew Pre-Survey

National seafood surveys suggest that shellfish consumers have higher than average educational attainment and household income (Jahns, Raatz, Johnson, Kranz, Silverstein, et al., 2014) and are likely to be more than 50 years of age (Zhang, House, Sureshwaran, & Hanson, 2004). These studies also pointed out that most seafood consumption occurs away from home—between 62% (Zhang et al., 2004) and 90% (Richards, 2020d).

Consumption predictions based on past survey data are concerning for South Carolina's oyster industry, indicating that it may suffer longer than other agricultural commodities. The economic fallout of COVID-19 is reducing household income and those over 50 years of age may be less likely to visit a restaurant due to being in a high-risk group for COVID-19 complications.

South Carolina Oyster Consumer Survey

While oyster consumption in the U.S. is fairly low, at 0.18 pounds (0.08 kg) of oyster meat per capita (USDA ERS, 2019), South Carolinians consume almost twice this amount (Cheplick et al., 2020). This raised a question: are there differences between South Carolina oyster consumers and those in the general population? In July 2020, an oyster consumer survey was designed to research this question, with input from oyster growers, other Clemson researchers, and the South Carolina Sea Grant Consortium.

In August 2020, over twelve hundred (1,210) consumers in the South Carolina coastal and metropolitan areas were surveyed, which includes zip codes from the South Carolina counties of Greenville, Spartanburg, Richland, Lexington, York, Horry, Georgetown, Charleston, Colleton, Beaufort, and Jasper. Chatham County (Savannah, Georgia) and the zip codes contained by Charlotte, North Carolina, were also included. Of the consumers surveyed, 905 were oyster consumers and 305 were non-oyster consumers.

Survey Results: Consumer Demographics, Oyster Consumption, and COVID-19

We found that survey results were somewhat consistent with national surveys with respect to education and household income. However, South Carolina oyster consumers tended to be under 45 years of age (Table 1). Our survey also found that the 76% of oyster consumption occurred away from home, at restaurants and oyster roasts (Richards, Motallebi, & Dickes, 2020), which was exactly the midpoint of the range previously mentioned.

COVID-19 Impacts on Oyster Consumption in Restaurants

The survey also attempted to estimate the economic damage to South Carolina oyster growers caused by COVID-19 restaurant shutdowns and reduced dining capacity (Table 2). The results showed that over 60% of respondents either decreased or stopped their oyster consumption at restaurants due to COVID-

19. The reasons given for this reduction include that restaurants were closed or had reduced dining capacity, people were avoiding eating out due to COVID-19, restaurants were offering fewer oyster options, and oysters were not desirable for or offered for carryout dining.

Signs of Hope for a Future Recovery

There were three bright spots from this data: younger than expected consumers, higher than expected consumption at oyster roasts, and oyster consumption at restaurants not declining in all instances. The younger oyster consumer might mean that there will be a faster rebound in restaurant traffic. Oyster roasts are an outdoor activity that is safer and more acceptable for dining during the COVID-19 pan-

Table 1. Demographics of Oyster Consumers (n=905) and Non-consumers (n=305)

	Consume (Yes)	Do Not Consume (No)	Difference (Y-N)
Age			
Under 25	15.5%	14.8%	0.7%
25 to 34 years of age	31.0%	20.3%	10.7%
35 to 44 years of age	22.3%	20.3%	2.0%
45 to 54 years of age	12.9%	16.7%	-3.8%
55 to 64 years of age	10.1%	13.4%	-3.4%
65 to 74 years of age	6.7%	11.5%	-4.7%
75 years or older	1.4%	3.0%	-1.5%
Gender			
Male	32.0%	28.5%	3.5%
Female	68.0%	71.5%	-3.5%
Highest Level of Education Completed			
High School or Less	17.3%	23.6%	-6.3%
Some College or Associates Degree	35.8%	37.4%	-1.6%
Bachelors Degree	29.6%	27.5%	2.1%
Advanced Degree	17.2%	11.5%	5.8%
Household Income (self reported) (US\$)			
Less than \$29,999	18.0%	30.2%	-12.2%
\$30,000 to \$49,999	23.3%	19.7%	3.6%
\$50,000 to \$74,999	20.7%	24.9%	-4.3%
\$75,000 to \$99,999	14.1%	12.8%	1.4%
\$100,000 to \$149,999	14.9%	6.9%	8.0%
\$150,000 or greater	9.0%	5.6%	3.4%
Size of Household			
Only me	15.1%	15.4%	-0.3%
Two people	32.2%	32.5%	-0.3%
Three people	21.0%	25.6%	-4.6%
Four people	19.3%	13.8%	5.6%
Five or more people	12.4%	12.8%	-0.4%
Race			
White/Caucasian	69.8%	60.7%	9.2%
Black/African American	24.3%	36.1%	-11.8%
Asian	4.0%	1.6%	2.3%
American Indian or Alaskan Native	1.1%	1.6%	-0.5%
Native Hawaiian or Pacific Islander	0.8%	0.0%	0.8%

demic. Finally, almost 40% of oyster consumers either did not change or increased their oyster consumption during the pandemic (Table 2).

There is much more data from this survey that will be used to help oyster producers recover from COVID-19 losses.

These results will be published in 2021 and will include regression analyses and zip-code mapping to help oyster growers market their products more effectively. Also, 2021 will hopefully see a COVID-19 vaccine and a return to some degree of normalcy.

Table 2. COVID-19 Restaurant Impacts on Consumption (n=905)

	Frequency	Percent
How Has Your Consumption of Oysters at Restaurants Changed		
I have increased my consumption of oysters	75	8.3%
I have not changed my consumption of oysters	285	31.5%
I have decreased my consumption of oysters	298	32.9%
I have stopped consuming oysters due to COVID-19	247	27.3%
Reasons Consumption Decreased at Restaurants (n=298)		
Closed or reduced dine-in capacity	200	67.1%
I am currently avoiding eating out due to COVID-19	140	47.0%
I do not want to order oysters for carry-out	101	33.9%
Restaurants offering fewer oyster menu items	63	21.1%
Restaurants not offering oysters for carry-out	57	19.1%

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