Introduction

Do shucked oysters originating from the waters of Cape Cod look, smell, or taste differently than shucked oysters grown outside of Massachusetts? Local members of the American Culinary Federation, Cape Cod and the Islands Chefs Association (ACF) were asked to evaluate this question as part of an effort to research the viability of a market for shucked oysters from Massachusetts waters. Currently there are no oyster processors in Massachusetts. Ninety-four percent of the shellfish aquaculture industry in Massachusetts is oysters grown for the half-shell market. The shucked oysters available to restaurants are commonly sourced from the Chesapeake Bay or Pacific Northwest regions of the United States. There is interest within the Massachusetts shellfish aquaculture industry to diversify and supplement income by creating value-added products such as custom-labelled containers of shucked oysters.

Working with the ACF, six chefs agreed to participate in the shucked oyster cooking and taste evaluation. In May 2019 the ACF worked with the Cape Cod Buy Fresh Buy Local program, Umass Dartmouth Center for Marketing Research, and Cape Cod Cooperative Extension to hold an in-person event for local chefs that featured new aquaculture products being grown on Cape Cod (Barnes 2019). Building on that event, another had been planned for April 2020 that would have featured shucked oyster recipe tasting and evaluation, again sponsored by the Buy Fresh Buy Local program of Cape Cod and organized by the Umass Dartmouth Center for Marketing Research. Unfortunately, this in-person event was canceled due to COVID-19. An ‘in-home’ or “in-restaurant kitchen” setting event was then organized by the project team of Barnstable County Cape Cod Cooperative Extension, Woods Hole Sea Grant, Wellfleet Shellfish Promotion and Tasting, and Cape Cod Commercial Fishermen’s Alliance using existing funding from NOAA Sea Grant. Cooking at home or in the kitchen of their restaurant allowed the chefs to prepare their recipes and evaluate the oysters while observing social distancing and other COVID-19 restrictions.

The local oysters were sourced from the waters of Falmouth, Massachusetts. They were shucked by a licensed processor (shucker packer) in Ipswich, MA, as part of an activity to measure the efficiency of a piece of equipment designed to break oyster shells and aid the shucking process (Reitsma 2020). They were then placed into 4lb pillow packs, frozen, and stored at a wholesale facility. The project partners wanted these oysters to be evaluated side-by-side with a comparable shucked oyster product that was easily obtainable by a food service provider. In this case the provider was able to source frozen shucked oysters from the Chesapeake Bay waters near Crisfield, Maryland. The goal of this activity was to gather honest opinions from the chefs on any differences between the two products.
Each chef was given (4lbs) of local oysters and (4lbs Maryland oysters). This was not a blind test, so the chefs were aware of the origin of the oysters. The participating chefs were asked to examine the two sets of shucked oysters and score each batch using a scale from 1 to 3 (1=Not Good, 2=Good, and 3=Excellent) based on the following attributes:

- Appearance
- Smell
- Ease of Use in Recipe
- Flavor
- Saltiness
- Texture
- Moisture

Each chef chose one or more recipes to cook as part of the shucked oyster evaluation:

<table>
<thead>
<tr>
<th>Chef Name</th>
<th>Restaurant/Business</th>
<th>Location</th>
<th>Recipe(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nicholas Reney</td>
<td>Hyannisport Club</td>
<td>Barnstable</td>
<td>Bang Bang Fried Oysters</td>
</tr>
<tr>
<td>Daniel Ferrare</td>
<td>Kittansett Club</td>
<td>Marion</td>
<td>1) Baked Oysters with Creamy Spinach, Hollandaise Sauce</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2) Southern Fried Oysters with Crunchy Slaw and Red Pepper Remoulade</td>
</tr>
<tr>
<td>Sean Moore</td>
<td>Kittansett Club</td>
<td>Marion</td>
<td>1) Cumin Fried Oysters with Roasted Corn, Black Bean, and Spanish Rice</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Tortilla Bowl and Enchilada Vinaigrette</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2) Butter Poached Oyster Tartlets with Spinach, Anisette, and Hollandaise</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Glaze and Asiago Tuille</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3) Baked Oysters and Caramelized Parmesan Crust</td>
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<td></td>
<td></td>
<td></td>
<td>4) Creamy Oyster Casserole with Apple Smoked Bacon and Dry Sherry and</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Swiss Cheese</td>
</tr>
<tr>
<td>Michael Beriau</td>
<td>Retired</td>
<td>Bourne</td>
<td>Beer battered oyster, House chips, malt vinegar aioli</td>
</tr>
<tr>
<td>Eric Pezullo</td>
<td>Wianno Club</td>
<td>Barnstable</td>
<td>Bacon Wrapped Oyster Rockefeller</td>
</tr>
<tr>
<td>Michael Pillarella</td>
<td>Wianno Club</td>
<td>Barnstable</td>
<td>1) Summer Oyster Stew</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>2) Crispy Fried Oyster</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>3) Chourico Crisp</td>
</tr>
</tbody>
</table>

Table 1. Chef names, restaurant, location, and chosen recipe(s)

The chefs were asked why they chose these particular recipes and the answers (below) ranged from inspiration from past menus and classic dishes to a desire to analyze cooking techniques.

*This recipe was on our menu around this time last season, and the membership really enjoyed it. I even had to prepare these after I took them off [the menu]. They also work well with the frozen product, and, bonus, lots of textures on the plate. And great presentation.*

*Very often shucked raw oysters are used in fried preparations. So, a Southern fried (seasoned flour dredged) with a crunchy slaw with a classic red pepper remoulade seems to work nicely together.*

*It is a modern play on the classic Oysters Rockefeller, with a variation of topping the oyster with a hollandaise sauce in place of the parmesan cheese crust.*
Different take on a classic fish and chips.

To analyze the versatility with low heat butter.

The simplicity of the recipe allows the natural flavors of the oysters to shine through.

Wanted to do a modern twist on a classic dish.

Results

<table>
<thead>
<tr>
<th>Attributes</th>
<th>Cape Cod</th>
<th>Maryland</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>2.50</td>
<td>2.33</td>
</tr>
<tr>
<td>Smell</td>
<td>2.67</td>
<td>2.00</td>
</tr>
<tr>
<td>Ease of Use in Recipe</td>
<td>2.83</td>
<td>2.17</td>
</tr>
<tr>
<td>Texture</td>
<td>2.50</td>
<td>2.17</td>
</tr>
<tr>
<td>Flavor</td>
<td>2.83</td>
<td>1.83</td>
</tr>
<tr>
<td>Saltiness</td>
<td>2.67</td>
<td>2.00</td>
</tr>
<tr>
<td>Moisture</td>
<td>2.33</td>
<td>2.33</td>
</tr>
</tbody>
</table>

Table 2. Average scores of the shucked oyster products evaluated by the chefs. A higher score indicates a better impression (3 was excellent, 2 was good, and 1 was not good).

Before Cooking

Appearance

For the Cape Cod product, the average score for appearance was 2.5 out of 3 points and the chefs commented on the color and the size. The Cape Cod oysters were darker than the Maryland oysters. One chef elaborated, “The lips of the oyster were consistently and considerably darker than that of the Maryland oyster. This has no bearing when frying the oyster but darkens the appearance of stew, soups and sauce.” Chefs also described the Cape Cod oysters as being more consistent in size than the comparable product and a little smaller. One chef commented, “consistency in size is crucial.”

On the comparable oyster product, the appearance score was 2.33 and chefs described the color, shape, and size. The color was described as lighter than the Cape Cod oysters and, “appealing.” The shape was described as “plump” in several comments. The oysters were larger than the others and chefs described the size as less consistent than the others. One chef elaborated, “The oysters were inconsistent in size with some ranging over four inches while others were no larger than two.”
Smell

The Cape Cod product smell was rated as excellent or good on the given scale with an overall score of 2.67 out of 3 points. Comments included, “The aroma of the Cape Oysters is the same as the taste, incredibly fresh ocean smell. Very pleasing!” and, “…nice briny smell…” and “Fresh ocean smell.”

On the comparable oyster product, the chefs gave ratings of excellent, good, and not good leading to an average score of 2.00. The smell was described as, “about the same,” “similar,” “not much smell at all” and “Certainly not off, by any means but, just kind of dull and lackluster in comparison.”

In the Recipe:

Ease of Use in Recipe & Texture

The Cape Cod product texture received an average ‘ease of use in recipe’ score of 2.83 and for texture 2.5. Several chefs described them as ‘delicate’ and again discussed the size and consistency.

*Being what they are and delicate in nature, they need to be handled gently.*

*The Cape Oyster is a little delicate… but that is a plus in the finished product.*

*Again, the oysters were consistently a manageable size making preparing the recipes much easier. The oysters were intact and unblemished indicating a quality shucking process.*

*Great size and texture – couldn’t tell they had been frozen in the preparation.*

*They were easier to use because they were more consistent. This makes the cook times more consistent as well and looking more even.*

The comparable product received an average score of 2.17 for both ‘ease of use in recipe’ and texture.

Opinions about the comparable product ease of use in recipe varied but the issue of size consistency was brought up again.

*Very easy in all 4 of the cooking techniques.*

*Inconsistent size, having to sort through to find similar size.*

*The oysters were inconsistent in size, making them more difficult to use. If you were cooking these oysters, the cook time would be different and the appearance would be inconsistent. They did look very nice with a cream-colored consistent complexion. For the most part the oysters were all whole an indication that they were shucked and handled properly.*

*They were harder for cook times due to inconsistency of size.*

Opinions about texture also varied.

*The Marylands are a nice plump little oyster, with a nice texture.*
...a lot of chew on them being so large and inside a bit mushy. Would be best in soup preparation.

More rubbery, not as palatable but still good.

**Flavor**
The Cape Cod oysters flavor received an average score of 2.83 with descriptions such as:

*The flavor was nice and delicate with a quality saltiness that you would expect from a superb oyster.*

*Fresh briny ocean flavor.*

*They were a little sweeter and more tender.*

For the comparable product the average score for flavor was 1.83. The comments indicated the chefs did think there was a difference in flavor between the two products.

*As easy as they were to work with the flavor in the final product, failed in comparison to the Capes.*

*The Marylands weren't bad, and if we were served them, we certainly wouldn't be disappointed. But if we were given a variety as so many restaurants do now, we are confident that the Capes would be the favorite.*

*Not as sweet as local ones.*

*...no great fresh oyster taste especially compared to the Cape oyster.*

*...for us it all comes back to the Cape's amazing fresh ocean flavor and aroma of freshness.*

**Saltiness**
The Cape Cod product saltiness received an average score of 2.67 and was described as “medium,” and “Absolutely spot on - can't say enough good about it.” On the comparable product, the average score for salinity was 2.00, and one chef commented, “they were spot on for salinity.”

**Moisture**

Moisture was the only attribute that the two products received the same score on – 2.33. For the Cape Cod oysters, one chef commented, “Perfect, moisture content in all presentations. I made the presentations in four different cooking techniques just to see how they would react to each.”
Non-Scored Responses

Shucked Oyster Size

When asked if the size of the shucked oyster is an important aspect when considering what recipes to prepare with shucked oysters, all chefs indicated that it was.

Yes, as there is always some shrinkage once they are cooked. You need to have a finished product that looks good and is an appropriate size for the final application. Either as an hors d’oeuvre or as a component in a dish.

Yes, I believe it could be. Not so much for a chef or a foodie-type diner, but for the average diner there is a perceived value that bigger is better value for their dollar.

The size is most important factor other than the general quality of the oyster. As different sizes can be utilized for different end products. The major consideration is the oysters consistent size within the pack. If one could specify small, mediums or large oysters with the different price points that would be the most beneficial.

Yes, if you were going to go with a stewed variety, the large oyster would be best – more yield and have time to properly cook. In a baked, grilled, fried, you like to have something smaller to cook properly and have a nice one bite.

Consistency is very important.

Yes, depending on what you’re doing. For my application being smaller and more consistent worked better for this recipe.

The chefs were also asked if they prefer to work with a certain size. The answers varied. Three chefs prefer medium sized, defined as either 2 inches shucked or in the range of 1.5-2 inches. One commented that, “Smaller is a challenge but large oysters can be used for soups and stews.” Two chefs said that consistency of size within a batch is key. One chef said that size is less important than flavor and fresh quality, and that, “when local is superior that is an easy decision.”

Fresh vs. Frozen Product

The chefs were asked, “Is there a difference in level of effort in preparing frozen vs fresh shucked product? Do you have a preference?”. Three of the six chefs explained in diverse ways that there was not a difference in level of effort for the recipes that they chose to prepare. Fresh was preferred over frozen by four of the six chefs, but one chef explained that freezing did not seem to affect the product negatively.

I believe there is no real difference in effort. I tend to like fresh over frozen.

Both have the slime, for lack of better words, however the fresh would be my preference if available.
The time savings is minimal, and the freezing does not seem to adversely affect the product. I would rather buy super fresh frozen oysters than fresh oysters that are not so fresh. Also, the [pillow] pack of the local oysters is substantially better than a gallon or ½ gallon container.

I prefer using fresh shucked based on quality and readiness.

Not in this application, but fresh is usually better.

Shucked are great for certain preparations, and if you have an oyster po boy that is doing well on a menu you don’t want to be shucking all those oysters, or an cocktail party with oysters shucked are great as well. But on the raw side needs to be opened to order to ensure brine is staying in the oyster.

The chefs were also asked if the difference between fresh or frozen would significantly impact which product they chose to buy. Two said “no” and elaborated that it would not matter as long as the quality of the product was good, and that they would choose Cape oysters no matter what. One chef answered “possibly” and again that it “mostly hinges on the quality of the product.” Two chefs answered “yes,” and one clarified that, “I would prefer the Cape Cod.”

**Purchasing Local Shucked Oysters**

When asked if they would buy local frozen shucked oysters regularly for the restaurant if they were available and of comparable cost, all chefs answered positively. Three said “yes,” two said “absolutely” and one said “of course.”

Yes, I am waiting for dining to open to put the bang bang oysters back on the menu. We are staying away from fried foods currently because they don’t travel as well. Also raw because of the same reasons and can’t wait to start serving oysters again. We do have the best in the world in our backyard.

Of course, would prefer to get local oysters even if frozen.

Yes, we change our menus biweekly and are often using shucked oysters.

Five of the six chefs answered the question, “Would you buy local frozen shucked oysters if they cost MORE than frozen oysters from another region?” Four said “yes” and one said “most likely.”

I stay local. It helps support a lot of people around us. Even if price is higher, I know quality will be better.

With my history of doing best to always ensure and deliver the highest quality product, price point is always a concern as we can only sell what the market will bear. If the local was less than 20-25% higher I would always stay local. The locals are better flavor, that’s the bottom line for me.

Most likely, depending on the price difference and the consistent size.

Yes, would prefer to buy frozen local.
Closing Words

At the end of the survey the chefs were asked, “Is there anything else that you observed while participating in this experiment and would like to share?”.

The overwhelming response was the quality, and the ocean-like taste in regard to saltiness and minerality.

You asked very good questions. I very much enjoyed participating in this program, and would be available to assist in the future in any means possible if it helps to promote our local fishermen, shellfishermen or farmers. I enjoy working with the product.

The local oysters were a joy to use and look forward to using them again. The packaging of the frozen local oysters was excellent. It allows for them to be defrosted quickly and they also stack very nice in a frozen case. I would continue this ease of use packaging.

I enjoyed doing this experiment and thanks for adding me in. I truly can say, buy local for sure.

Always prefer the local Cape Cod oysters even if frozen and costs a little more. Also prefer to support local farmers as much as possible.

I have to say that I, along with my wife and two other foodie folks, were very impressed with the Cape oysters. I prepared several different presentations and after the first tasting, I did blind tastings and the Cape oyster was picked.

Conclusion

Based on responses, chefs seemed enthusiastic about the possibility of a Massachusetts local shucked oyster product. Consistency of size within a batch was brought up throughout the survey as an important product attribute. Restaurants have many choices for buying shucked product and both products evaluated well. Locally-shucked oysters will be competing against quality products, and while local is a selling point to some, the Massachusetts product seemed to excel in the areas of aroma, flavor, and saltiness. It is not certain whether the local product would have a selling or price-point advantage, but there is some indication of that possibility. Though this was only one trial and was limited in scope, the results indicate a possibility for a local niche for this product. These results should provide impetus to continue efforts to explore diversifying the oyster market locally, especially as oyster production continues to grow.

APPENDICES

A. Instructions to chefs
B. Questionnaire for chefs
C. Photographs taken by chefs of recipe preparation and final products
References

Reitsma, Joshua, Archer, Abigail, Booth, Harriet, Murphy, Diane. In Collaboration with Michele Insley, Wellfleet Shellfish Promotion and Tasting (SPAT) and Melissa Sanderson, Cape Cod Commercial Fishermen’s Alliance. April 1, 2020. An Exploration of Market Potential for MA Oysters.


If you have questions about this report please contact any of the following people.

Abigail Archer, Cape Cod Cooperative Extension and Woods Hole Sea Grant  aarcher@barnstablecounty.org

Melissa Sanderson, Cape Cod Commercial Fishermen’s Alliance  melissa@capecodfishermen.org

Michele Insley Wellfleet Shellfish Promotion and Tasting  michele@wellfleetspat.org
Shucked Oyster Cook-Off!

Comparing Cape Cod shucked & frozen oysters to Maryland shucked & frozen oysters

Dear Chefs,

Thank you for taking the time to participate in this Shucked Oyster Cook-Off.

This activity is part of a project to research the viability of creating a market for shucked Cape Cod oysters. As you are aware, the shucked oysters that are readily available to restaurants are usually sourced from the Chesapeake Bay or Pacific Northwest Regions. The goal of this activity is to gather your honest opinions on the differences in shucked & frozen oysters from Cape Cod vs. shucked & frozen oysters from Maryland.

Materials

The local oysters that have been delivered to you are sourced from the waters off of Falmouth, Massachusetts. They were shucked by Ipswich Maritime Products as part of an activity to measure the efficiency of a piece of equipment designed to break oyster shells and aid the shucking process. They were then placed into 4lb pillow packs, frozen, and have been stored at the wholesale facility of Big Rock Oysters.

The shucked & frozen oysters are from the Chesapeake Bay waters off of Crisfield, Maryland.

A set of questions has been prepared to gather your opinions on the products. You can either print out the pdf and put your answers on paper, or you can answer the questions via an online survey at: http://survey.constantcontact.com/survey/a07eh31cevbkacxpimu/start

Directions

1) Please examine the Cape Cod and Maryland oysters and answer questions # 1-7 on the survey. On the e-survey these are questions #1-9.

2) Prepare two batches of the same recipe – one with the Cape Cod frozen oysters and one with the Maryland fresh oysters. Take note of any differences in the experience of preparing the recipe with the two different types of oysters and write any comments.

3) Take some selfies of you preparing the recipes – or if it can be done safely – ask a colleague or family member to take some photos of you. Please also take photos of the final dishes, and of you or your colleagues or family tasting the dish.

4) Taste your creations and answer questions # 8-21 on the paper survey, or on the e-survey questions #10-32. If there is information that you think is important but that we did not include on the survey, please add it! We would like as much information from you as you are willing to share.

Goal of this Activity

We would like to receive your honest opinions about whether the oysters from Falmouth are different in any way - good or bad - from the oysters from Maryland. Staff from the Barnstable County Cape Cod Cooperative Extension, Woods Hole Sea Grant, Cape Cod Commercial Fishermen’s Alliance, and Wellfleet SPAT have been working together to explore possibilities for locally grown oysters to be sold in forms other than on the half-shell.

Thank you for your time spent on this project!

If you have any questions please feel free to call or email or text Abigail Archer.

Email: aarcher@barnstablecounty.org       Call: 508-375-6702       Text: 781-775-7967
Shucked Oysters Cook-Off
Cape Cod Shucked & Frozen Oysters vs. Maryland Shucked Oysters

1. Name:
2. Restaurant or Business Name:
3. Date:
4. What recipe did you choose to prepare?
5. Why did you choose this recipe?

PREPARATION
Rating Scale of 1-3: 3 = Excellent  2 = Good  1 = Not Good

6. How do you rate the Cape Cod Oysters on:
   Appearance   3  2  1
   Smell        3  2  1

   Comments:

7. How do you rate the Maryland Oysters on:
   Appearance   3  2  1
   Smell        3  2  1

   Comments:

IN THE RECIPE
Rating Scale of 1-3: 3 = Excellent  2 = Good  1 = Not Good

8. How do you rate the Cape Cod Oysters on:
   Ease of use in recipe  3  2  1
   Flavor                 3  2  1
   Saltiness              3  2  1
   Texture                3  2  1
   Moisture               3  2  1

   Comments:

9. How do you rate the Maryland Oysters on:
   Ease of use in recipe  3  2  1
Flavor  3  2  1
Saltiness  3  2  1
Texture  3  2  1
Moisture  3  2  1

Comments:

10. Is the size of the shucked oyster an important aspect when considering what recipes to prepare with shucked oysters?

11. Do you prefer to work with a certain size?

12. Is there a difference in level of effort in preparing frozen vs fresh shucked product? Do you have a preference?

13. Would this difference significantly impact which product you chose to buy?

14. Would you buy local frozen shucked oysters regularly for your restaurant if they were available and of comparable cost?

15. Would you buy local frozen shucked oysters if they cost MORE than frozen oysters from another region?

16. Is there anything else that you observed while participating in this experiment and would like to share?

SHARING THIS INFORMATION

17. May the project team include your photos in the final report for this project which will be shared publicly?  Yes  No

18. May the project team share your photos on Facebook and Twitter?  Yes  No

19. If yes, are there hashtags we should use to identify your restaurant or business, or links to your website or other social media sites we should use?

20. Are you interested in being contacted by a local newspaper reporter if a story is done about this event?  Yes  No

21. If yes, what contact information may we share with the reporter?

Thank you for taking the time to prepare and taste the recipes and to share your opinions!
Chef Nicholas Reney, Big Bang Fried Oysters
Chef Daniel Ferrare, Southern Fried Oysters with Crunchy Slaw and Red Pepper Remoulade

Chef Daniel Ferrare, Baked Oysters with Creamy Spinach, Hollandaise Sauce
Chef Sean Moore, Beer battered oyster, House chips, malt vinegar aioli
Chef Michael Beriau with his shucked oyster creations

Chef Michael Beriau preparing the Cumin Fried Oysters with Roasted Corn, Black Bean, and Spanish Rice Tortilla Bowl and Enchilada Vinagrette
Chef Michael Beriau. Cumin Fried Oysters with Roasted Corn, Black Bean, and Spanish Rice Tortilla Bowl and Enchilada Vinagrette
Chef Michael Beriau, Butter Poached Oyster Tartlets with Spinach, Anisette, and Hollandaise Glaze and Asiago Tuille

Family of Chef Michael Beriau, taste testing the shucked oyster dishes
Chef Eric Pezzulo, Bacon Wrapped Oyster Rockefeller
Chef Michael Pillarella, Summer Oyster Stew