

## Understanding Culinary Market Trends for Fresh Sugar Kelp

Authors:

Suzie Flores, Stonington Kelp Company and Anoushka Concepcion, Connecticut Sea Grant

Seaweed aquaculture, specifically the cultivation of sugar kelp (*Saccharina latissima*) is an emerging crop in the United States. The combined challenges of a short harvest season with lack of commercial processing facilities, force kelp farmers in Connecticut to sell their seaweed in its fresh (raw) form, limiting access to market outlets beyond the harvest season. Kelp farmers in other New England states face the same processing and market challenges (State of the States, Seaweed Hub, 2023), thereby, preventing the collective expansion of the seaweed aquaculture industry in the Northeast. The goal of the project was to increase access to market outlets for fresh (raw) sugar kelp in Southern New England. Increasing the number of market outlets for fresh sugar kelp will provide farmers with a consistent revenue stream while looking for processing opportunities.

A survey using the Qualtrics XM platform, was developed in partnership with Connecticut Sea Grant and the Stonington Kelp Company, to better understand seaweed-related market trends of the Southern New England culinary industry. To ensure broad distribution, traditional print marketing, as well as social media marketing channels, were employed to maximize survey participation in order to facilitate a higher rate of responses. A graphic designer was hired to create a postcard design and corresponding social media post design to drive engagement to yield higher responses. Postcards, with a QR code linking to the Qualtrics survey, were mailed in February 2023 to approximately 500 market contacts located across Southern New England. Simultaneously, social media advertising (boost posting) was deployed for one month for an additional cost.

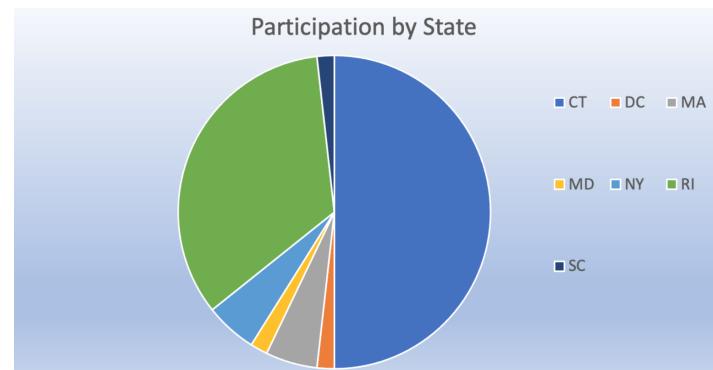
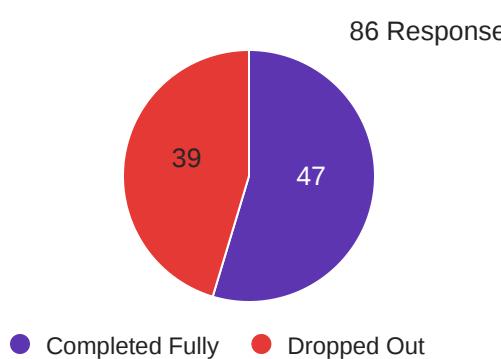
Results from the survey will provide sugar kelp farmers with a better understanding of culinary needs and market trends for fresh sugar kelp in Southern New England. Results can also inform farmers in other states, who routinely sell their kelp to processors, about the potential opportunities of selling their kelp in its fresh form, thereby increasing diversification of current market outlets. In addition, results can also inform culinary professionals across the country interested in learning new and innovative ways of sourcing and utilizing fresh kelp in their cuisine.

The results from the survey are provided in this final report. Support to deploy the survey using methods listed above, was provided through a Connecticut Sea Grant Development Award.

The survey was launched in Q1 2023 and closed in Q3 2023 via farmer run Instagram channels, through a postcard mailing targeting 500 CT and RI based restaurants, through the Sugar Kelp Cooperative mailing list (207 ppl), and through the CT Sea Grant Instagram.

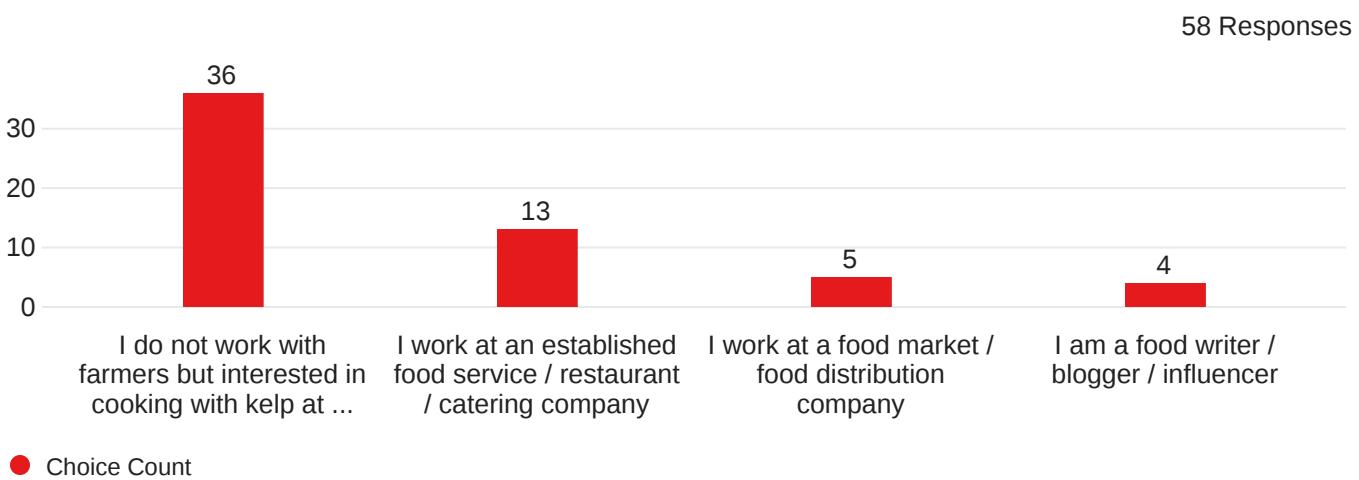
86 Participants began the survey with 47 completing and 39 dropping out. CT and RI were the largest pool of participants for the survey.

## Finished



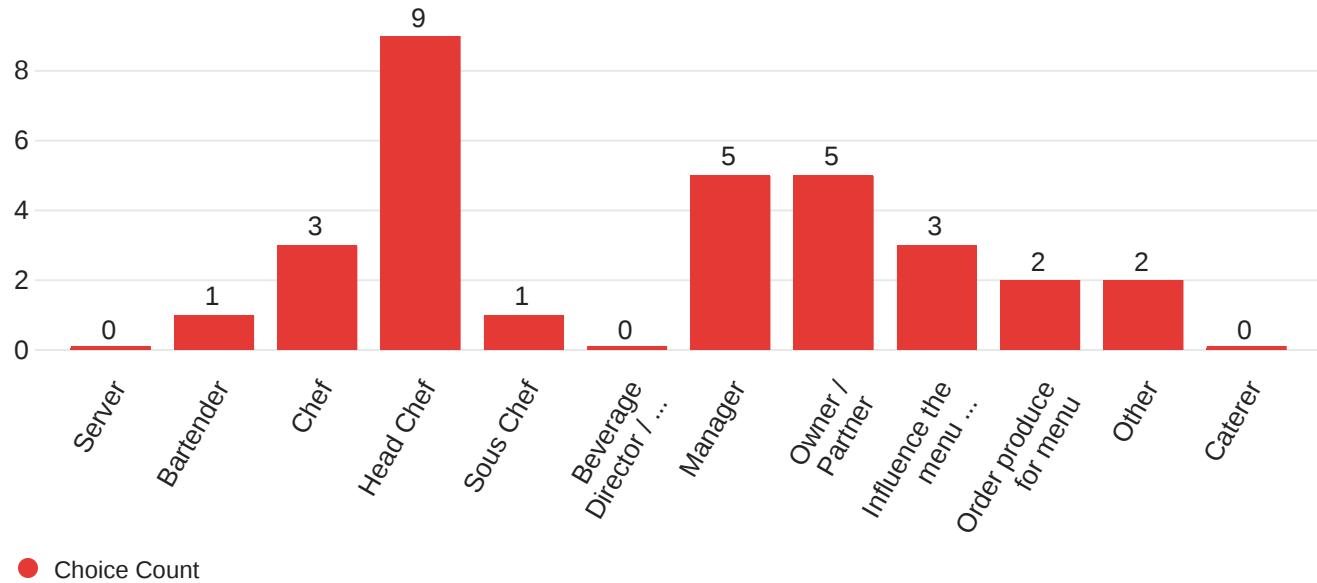
Majority of those who responded were not in the restaurant / food service industry. Of those who did respond, the majority were head chefs. The majority of respondents did not cook with kelp currently.

## Which of the following best describes how you would be involved with locally cultivated sugar kelp?



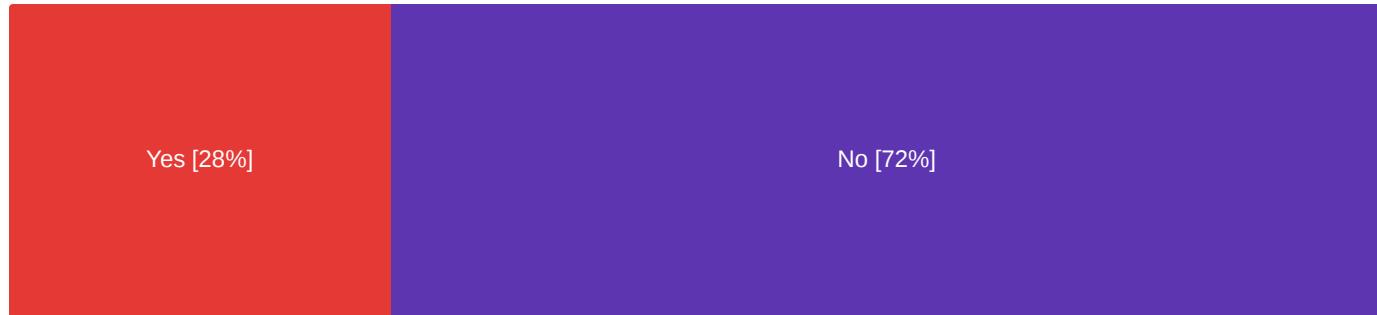
What is your role at your restaurant or food service establishment?  
(select all that apply) - Selected Choice

15 Responses



Do you currently use sugar kelp?

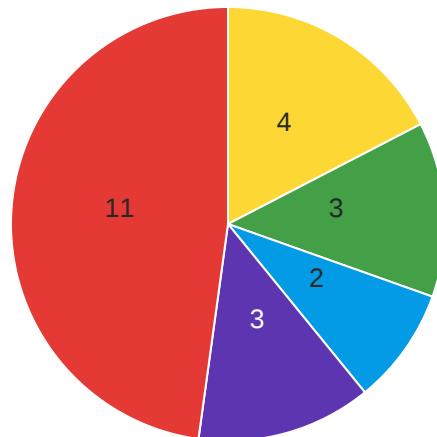
54 Responses



Of those who cook with kelp, most purchased directly from a farmer. This is most likely due to farmers sharing the survey directly with their customer networks and not indicative of how kelp is broadly purchased by the general public.

## Where do you source the sugar kelp you use? (select all that apply) - Selected Choice

15 Responses

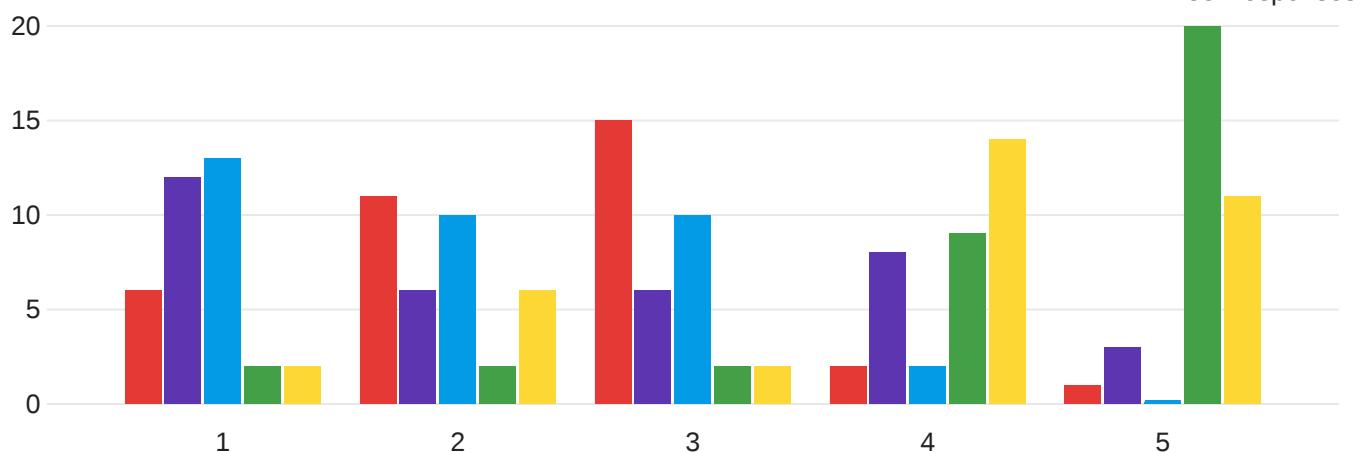


● Local farmer (s)   ● Other   ● Online retailer   ● Farmer located outside of Southern New England   ● Food distributor

Supporting local farms / waterfront, and nutritional benefits were the most highly valued among respondents suggesting more marketing materials highlighting those value propositions would appeal to the potential market.

## Please rank the following value propositions for cooking with local sugar k...

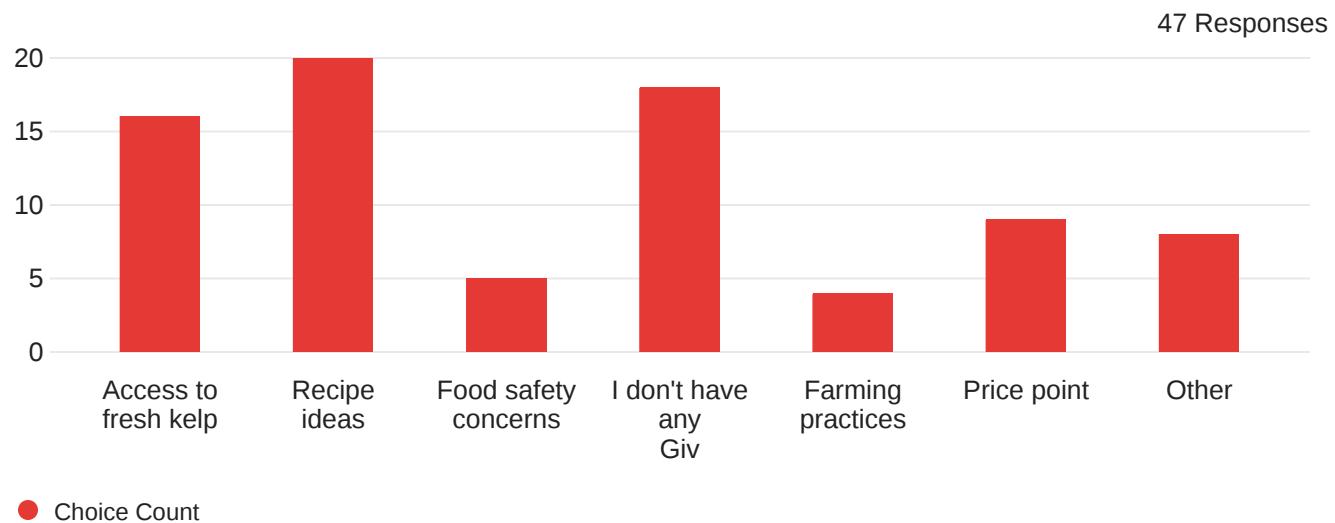
35 Responses



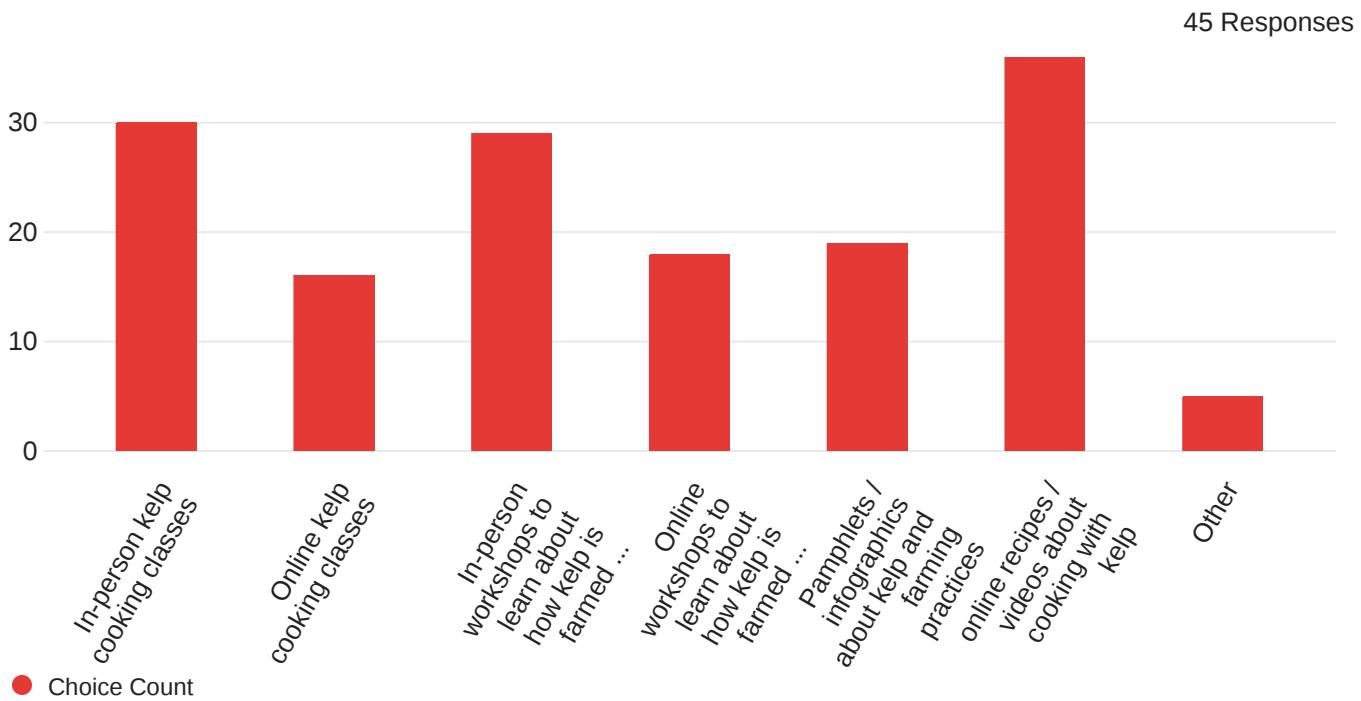
● Environmental benefits locally cultivated kelp offers   ● The nutritional benefits of eating locally cultivated kelp  
 ● Supporting a local farm / local working waterfront   ● Using a novel ingredient in my cooking  
 ● The flavor profile of locally cultivated sugar kelp

Recipes suggestions and how-to videos for cooking with kelp are the resources respondents would most like to see to support the industry.

### What hesitations (if any) do you have about cooking with / using sugar kelp (check all that apply)? - Selected Choice

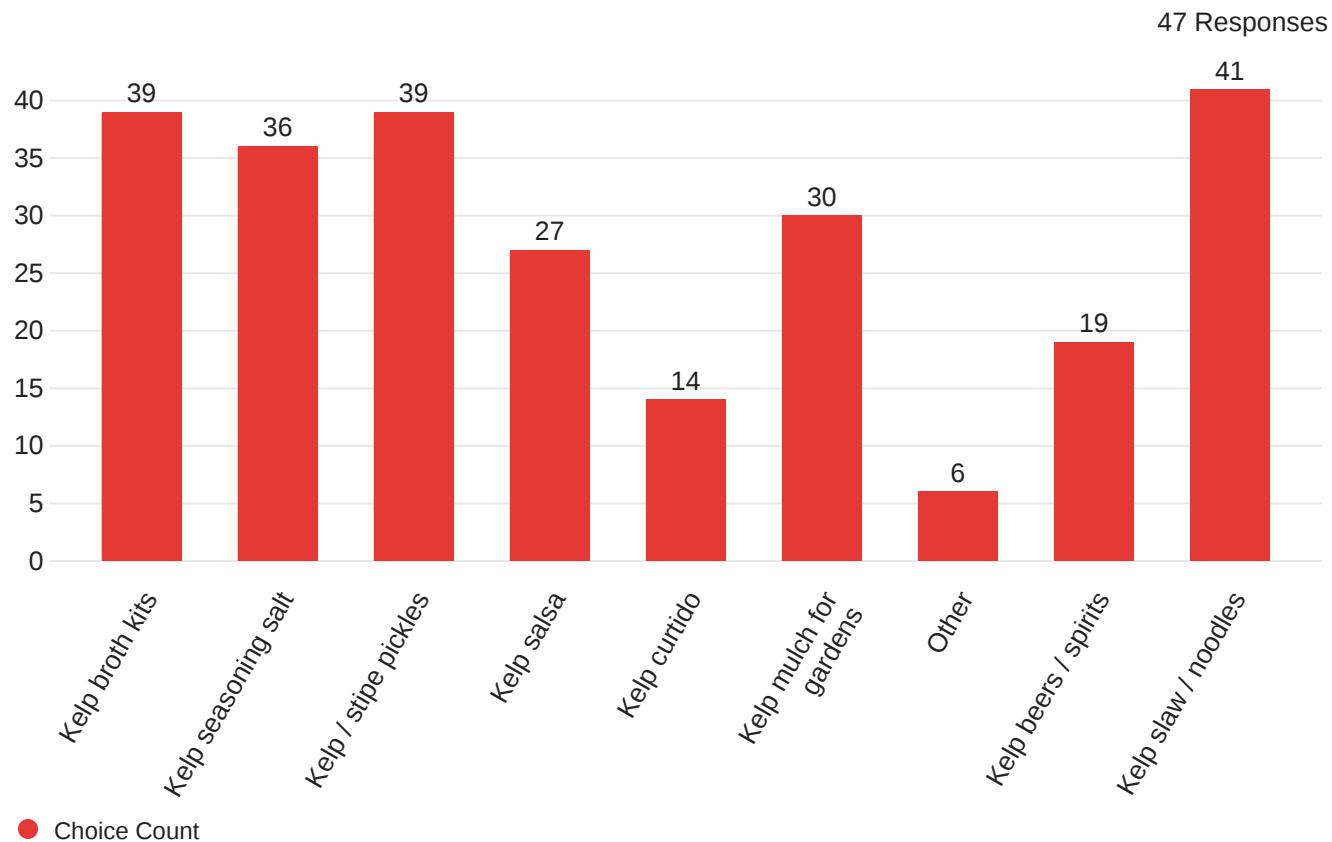


### Which of the following resources would you be interested in? (select all that apply) - Selected Choice



The following question represents what people would like to see developed but does not necessarily reflect what they would purchase / market potential. This does, however, show some promise for pickled and dried kelp value add products which are most accessible to small farmers to develop independently.

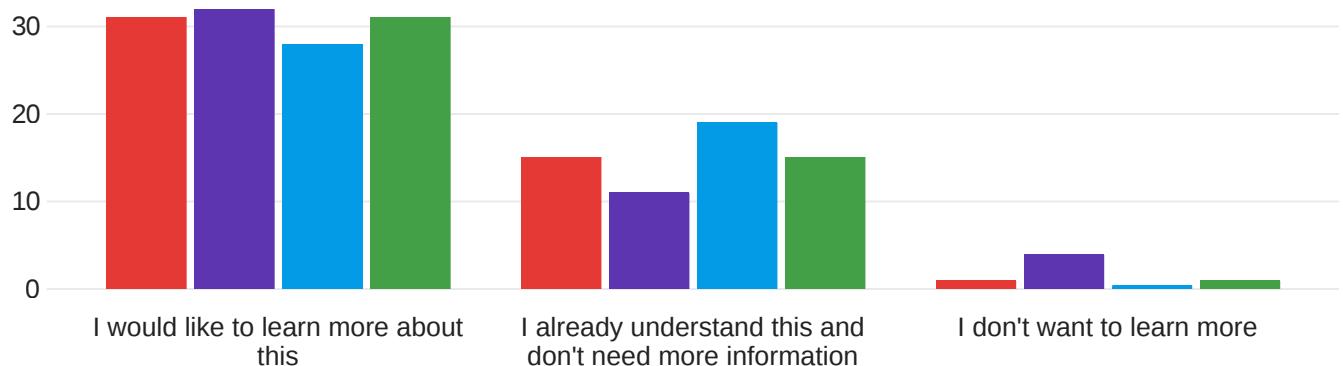
What kelp products would you like to see developed locally? Please select your top 5 choices. - Selected Choice



The following three questions help further guide where we can focus marketing materials about the industry broadly and suggest that seasonality, handling, and general biology of the kelp from a culinary perspective are areas where we can further make efforts to inform the public.

## Kelp FAQ Feedback (1/3)

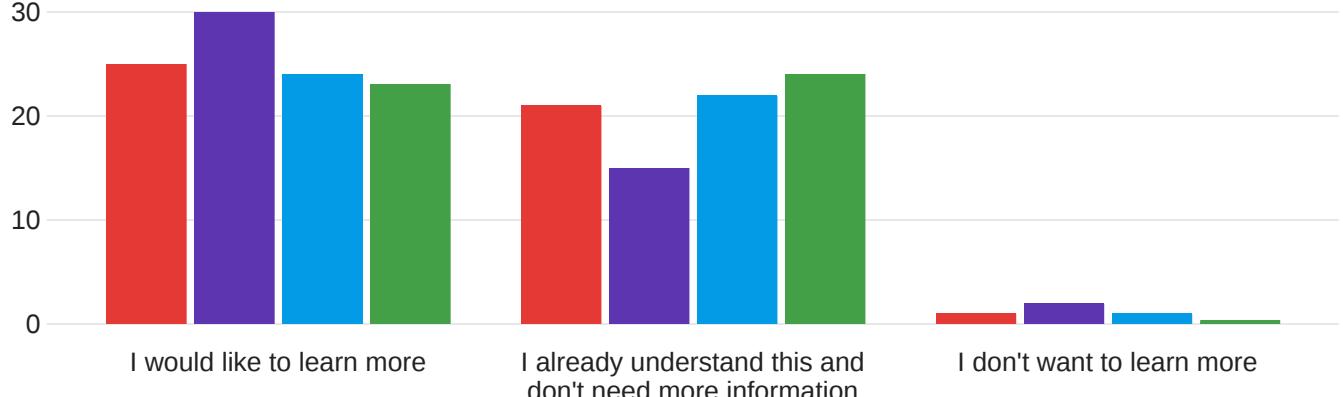
47 Responses



- Sugar Kelp stipes (stems) are edible and often pickled
- Sugar Kelp stipes are hyper-seasonal and can only be harvested at the very end of the year
- Sugar kelp has a powerful umami flavor which can enhance both savory and sweet dishes
- Sugar kelp is one of the fastest growing organisms on the planet: this means kelp...

## Kelp FAQ Feedback (2/3)

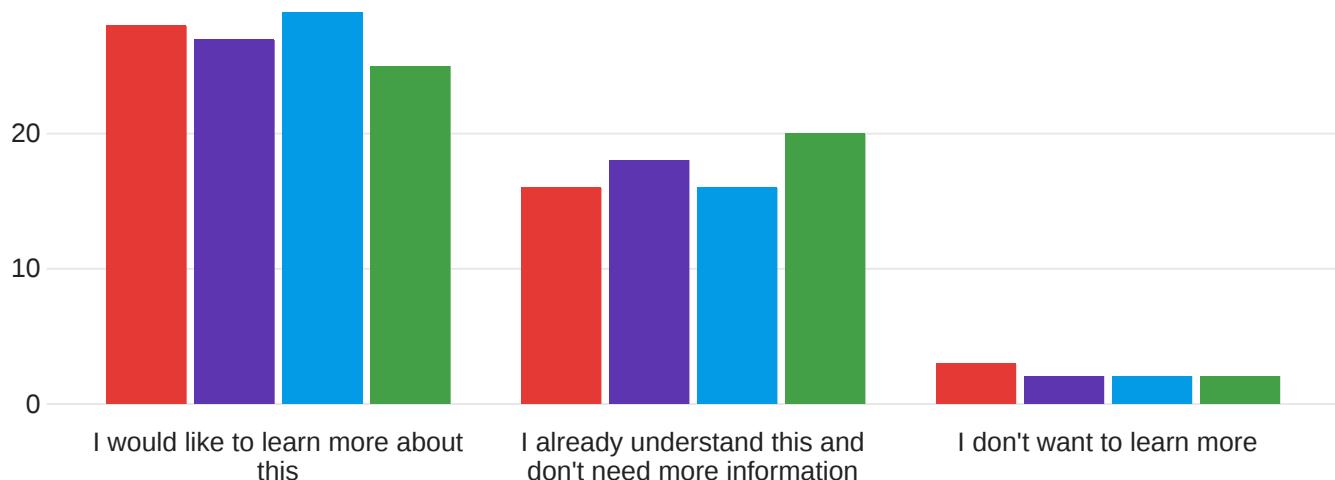
47 Responses



- Sugar kelp is a TYPE of kelp (there are over 33 species of kelp)
- Sugar kelp is a true local food. Farms in CT and RI can only grow native strains
- As sugar kelp grows, it pulls nitrogen and carbon out of the ocean which helps fight climate change
- Sugar kelp is seasonal and harvested fresh in April, May and June

## Kelp FAQ Feedback (3/3)

47 Responses



- In CT and RI, sugar kelp is regulated as seafood and tested prior to each harvest...
- Sugar kelp is a great source of iodine, iron and calcium and other vitamins and ...
- When handled correctly, freshly harvested sugar kelp can last in a refrigerated ...
- Sugar kelp can easily be made shelf-stable by drying / dehydrating or can be fro...

Digital and social media campaigns are the overwhelming preference for communicating information about the local kelp industry according to the respondents.

How would you like to stay informed about the local sugar kelp industry?  
(select all that apply) - Selected Choice

47 Responses



- Choice Count

## Conclusions

Seaweed farming is touted as an environmentally friendly and regenerative type of agriculture. Interest in this form of aquaculture is fueled by numerous social media campaigns and posts. While environmental benefits of cultivated kelp were of interest to culinary professionals, the highest value propositions indicated by this sector were supporting local farms and waterfronts as well as the nutritional benefits of kelp. These results are not surprising given that the local food movement (i.e. CSAs and Farmers' Markets) has had a huge impact on the way consumers, and culinary professionals, think about how their food is produced, who produces it, and where it comes from. There is also a growing desire to seek out healthier food options providing the perfect opportunity for sugar kelp to be incorporated into various cuisines.

Unfortunately, this survey did not adequately determine market potential for specific kelp products, which could inform processing needs. Post-harvest processing to increase shelf-life of fresh kelp is a huge barrier to the Southern New England seaweed aquaculture industry. A better understanding of the type of product forms most likely to be purchased by respondents would provide valuable information as to the types of processing equipment and facilities that would be needed. While respondents indicated an interest in seeing various kelp products developed locally, the survey design did not reflect which products would influence purchase power.

Although the Southern New England seaweed industry is small in comparison to Maine, the results of the survey clearly indicate that a market for fresh sugar kelp exists. The fresh market, although shorter in season, fetches a higher price point in comparison to processed forms due to its novelty. Current and prospective kelp farmers in Southern New England and beyond can utilize the results of this survey to inform market practices, thereby expanding their current market outlets.

## Acknowledgements

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