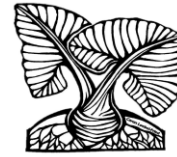




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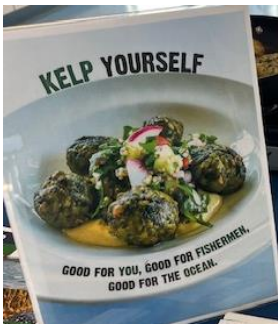
## **Magic in Salem, MA** By MDR

Eleven Hawaii School Nutrition Association members visited Salem High School in Salem, MA on July 17, 2024 as part of a Farm to School tour group sponsored by the Salem Public Schools. After the hubbub and excitement of the School Nutrition Association (SNA) Annual National Conference in Boston, it was a pleasant drive to Salem through the urban and rural areas outside of the big city.

The tour participants were a mixture of representatives from USDA, public school officials and instructors, and other SNA members. Focusing on school gardens, we walked the campus to the in-ground and above-ground gardens. East Coast growing seasons are short - only about 8 months from planting to harvest. Most of the harvest is used in school meals and the extra is shared with various community groups. Since the high school campus is adjacent to the elementary and middle schools, all students participate in maintaining the gardens and monitoring the growth of the crops under the guidance of agriculture and culinary teachers.



Lunch was sponsored by the Farm to School Vendor & Program Partners with products used in the school meals programs. One very unique entree item was the kelp slider patty and meatballs from North Coast Seafood. Kelp “patties and meatballs” are made from ocean farmed kelp off the coast of Massachusetts and combined with pea protein. Bread items served were made with locally-grown and ground wheat flours. Other partners shared their “magic tricks” to educate students on the nutritional benefits of fruits and vegetables with fun activities. Handouts included an activity calendar and event announcements. We marveled at the “Wizards of the Salem Public Schools” and the “Magic” of their Farm to School Programs. Hawaii’s programs have a lot to do to catch up! Mahalo to Salem for inviting Hawaii SNA to participate in this magical tour.



## **How Kelp is Grown**

Kelp, a type of fast-growing seaweed, is becoming an essential part of sustainable aquaculture. Growing kelp not only supports coastal economies but also contributes to environmental conservation. Here’s a look at how kelp is grown:

Kelp farming begins with selecting a suitable location, usually in coastal areas with clean, nutrient-rich waters. Ideal sites have strong water flow, which provides the kelp with nutrients while preventing the growth of harmful organisms. The water depth and temperature must also be within the optimal range for kelp growth. Kelp farming starts in a lab where tiny kelp spores are cultivated. These spores are encouraged to grow into seedlings on spools of string or ropes. The seeded ropes are then carefully transported to the farming site. The seeded ropes are attached to a network of anchored lines suspended in the water column. The lines are positioned horizontally, allowing the kelp to grow vertically downward, much like an underwater garden. This method maximizes exposure to sunlight and nutrients.



Kelp grows rapidly, sometimes up to a foot a day under optimal conditions. Farmers monitor the growth regularly, checking for any signs of disease or damage from marine life. Unlike land-based crops, kelp farming requires minimal inputs—no fertilizers or freshwater, making it a low-impact farming practice. After 3 to 6 months, when the kelp has reached its full length, it’s ready for harvest. The kelp is carefully cut from the lines, ensuring that the plant can regenerate, which allows for multiple harvests in a year. The harvested kelp is then processed into various products, including food, fertilizers, and even biofuel.



**Buy Local, Eat Local, Stay Local**



## Miyeok Guk (Korean Seaweed Soup)

### Ingredients

1/2 ounces dried seaweed (wakame)	1 Tbsp sesame oil
4 ounces beef chuck sliced smaller pieces	1 1/2 Tbsp Kikkoman soy sauce
1/4 tsp sea salt	1 tsp minced garlic
Pinch black pepper	5 cups water

### Directions

1. Soak the dried seaweed in cold water for 30 minutes
2. Rinse and drain the miyeok. Squeeze out excess water. Cut a few times into bite-size pieces.
3. Combine the sliced beef with the salt and black pepper in a small bowl. Mix them well and set aside until needed.
4. Pre heat a medium pot over medium heat (about 20 seconds).
5. Add the sesame oil, seaweed and beef. Stir them well until the beef is partly cooked (about 2 mins).
6. Add the soy sauce, garlic and water. Cover the pot and boil over medium – medium high heat until the meat is fully cooked (10 to 15 mins). Adjust the taste with more salt if needed.



### Seaweed Nutrition By JM

Seaweed provides a great number of vitamins and minerals for our bodies. It even has positive effects on health and is used to treat some diseases. In Asia, seaweeds have traditionally been used to treat cancer, heart disease, and thyroid problems. Seaweeds contain vitamins A, B, C, and E. They also provide all of the 56 minerals and trace minerals required for the body's physiological functions. They contain 10 to 20 times the minerals of land plants and an abundance of vitamins and other elements necessary for metabolism. The major minerals are instrumental in most of the life-sustaining activities in the body, such as magnesium, which is crucial in calcium absorption, iodine in thyroid function, iron in blood oxygen exchange, and

chromium in blood sugar regulation. Seaweeds also contain abundant amounts of protein, sometimes as much as 48%. Additionally, seaweeds contain 50-60% polysaccharides, specifically cell wall structural polysaccharides that are extracted by the hydrocolloid industry: alginate from brown seaweeds, carrageenan, and agar from red seaweeds. Alginates are not easily digested by our bodies, so they act like soft fiber by soothing and adding bulk to our digestive tract. Scientific studies have shown that alginates inhibit the absorption of toxic metals and radioactive isotopes, such as strontium-90, in the digestive tract. In conclusion, seaweed is a highly nutritious food that not only supplies essential vitamins and minerals but also offers numerous health benefits, making it a valuable addition to a balanced diet and a potential natural remedy for various health conditions. To learn more about the benefits of seaweed, refer to this resource: Philpott, J., & Bradford, M. (2006). Seaweed: Nature's Secret for Nutrition, 2.

### The Benefits of Farming Kelp

#### A Sustainable Solution for Food, Climate, & Economy

In recent years, kelp farming has emerged as a promising solution to some of the most pressing challenges facing our planet. From providing a sustainable food source to mitigating climate change, kelp offers numerous benefits that make it an increasingly popular choice for aquaculture. Here's a closer look at why farming kelp is gaining attention and how it can contribute to a more sustainable future.

Kelp can be harvested year-round, providing a consistent and renewable food source without the need for fresh water, fertilizers, or pesticides. This makes it an eco-friendly alternative to traditional crops and a valuable addition to a balanced diet. Kelp farming plays a significant role in combating climate change. Kelp absorbs large amounts of carbon dioxide from the atmosphere, helping to reduce greenhouse gases and mitigate ocean acidification. As kelp grows, it sequesters carbon in its biomass, which can then be removed from the ocean when harvested. This natural process contributes to the reduction of carbon footprints and helps maintain the health of marine ecosystems.



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