

PRESS RELEASES

(E.Jones/BGIS)

## Feature: Curse or Blessing?: Sargassum Seaweed Explored

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Large mats of seaweed, like this, are still en route to Barbados.

Since May this year, our once spotless beaches have undergone a virtual transformation in appearance, as considerable amounts of seaweed have taken over much of the seashore. The unattractive, though harmless, Sargassum seaweed has been washing upon our shores, especially the east coast, causing great concern across the island.

Unsure about why the high proliferation is occurring or how long it is going to last, top professionals in the health, agricultural and ecological sectors have drawn on their vast expertise to see how to best deal with this natural phenomenon.

The Coastal Zone Management Unit (CZMU), a

department of the Ministry of Environment and Drainage, is the entity responsible for the management of Barbados' beautiful coastline. With the continued presence of the seaweed creating a national worry, the staff at CZMU immediately focused its attention to resolving the issue.

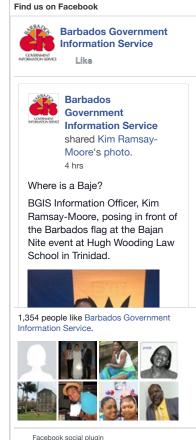
Sargassum seaweed is a brown, free floating alga that originates in the Sargasso Sea, located in the North Atlantic Ocean, as well as the Northern Gulf of Mexico. It is produced in large amounts, with mats in those areas being as large as two miles square.

Deputy Director of CZMU, Dr Lorna Inniss observed that the appearance of large quantities of Sargassum seaweed on Barbados' shores is by no means something new. She explained that Cyclical current patterns annually surround the Sargasso Sea, creating a natural restraint, and ensuring the seaweed stays in the Sargasso Sea. "However, sometimes algal pieces become entrained in currents headed towards the eastern Caribbean islands in relatively small, diffused slicks."

"We don't know at the moment what the cause is," Dr Inniss admitted. "At this point, scientists are still working on it and we are monitoring satellite images. Hopefully, we will have some idea as to the cause."

Since it is a natural phenomenon, scientists are faced with the challenge of determining how long it will last, especially without knowing the cause. Monitoring of the offshore mats has revealed that Sargassum seaweed is still en route to our shores, and the proliferation may last until the end of September or even into October. Dr. Inniss affirmed that through careful monitoring, CZMU would be able to inform the public when it will taper off.





## Health Impacts:

The presence of Sargassum seaweed on our shores cannot be ignored, particularly from an environmental health perspective. Specialist in the Environmental Health Department of the Ministry of Health, Ronald Chapman, shared his professional insight on many of the concerns Barbadians have with the Sargassum seaweed.

He assured: "You can touch it, you can look at it, you can run your foot through it..." Responding to queries about the use of the seaweed as a dietary supplement. Mr. Chapman confirmed that some cultures used seaweed as a tea. "However," he cautioned, "we don't recommend that people in Barbados use the Sargassum seaweed because we have been finding that the seaweed comes in and it has lots of debris entangled within it. Because of that, we cannot be sure of the quality of the seaweed when you take it home and boil it."

The strong smell which is sometimes associated with the seaweed has raised some concerns. Mr. Chapman explained: "Sargassum seaweed is used as a nursery for lots of small fish and other surface dwelling animals and plants. When it washes in, a lot of that comes in with the seaweed and what people may have been smelling is the natural decay of other fish and...surface dwelling organisms."



Debris and other surface dwelling organisms get trapped in the seaweed, causing a pungent odor. (A. Miller/BGIS)

## Agricultural Uses

One of the more popular solutions in dealing with the seaweed is to use it as a fertilizer. However, to gain the full benefits without causing any damage to crops, certain treatments and methods must be exercised. Agronomist with the Ministry of Agriculture, Food, Fisheries and Water Resource Management, with special responsibility for organic research and development, David Bynoe, gave pertinent information, as well as outlined the correct steps one must take when using the seaweed for agricultural purposes.

Based on analysis done by the Ministry of Agriculture, Sargassum seaweed has a nutrient content of around 1-1.5% nitrogen, 0.5 - 1.5% phosphorous, and 1-2% potassium. Mr. Bynoe explained that because of the small concentration of nutrients in Sargassum seaweed, larger quantities are required to experience meaningful results.

> It is important to note that the seaweed has a high salt content, and if applied directly to the soil, it will increase the alkalinity of the soil. Soil and plants require certain nutrients which are generally taken up better around a neutral pH; so the application of salty seaweed directly to the soil means certain amounts of micronutrients are not going to be available. Correct treatment of the seaweed before application is therefore very important.



To treat Sargassum Seaweed for use as a fertilizer, the sodium/salt must be leached. Luckily, this seaweed normally surfaces during the rainy season, and the rain is very useful in diluting the salt from the seaweed. After collecting it from the beach, simply spread it out 1-2 inches thick and allow at least an hour of continuous rainfall for each inch.

It is also a good idea to chop the seaweed into smaller particles, as this will allow the nutrients to be released even faster.

Composting is another option which makes the nutrients more readily available to plants. The seaweed should not be applied directly to plants. Instead, a drain should be dug between two plants and the seaweed placed along the middle.

As Mr. Bynoe pointed out, Sargassum Seaweed could be easily converted into liquid fertilizer, saving small scale farmers/gardeners a great deal of money. To make liquid fertilizer, the Sargassum seaweed should be placed in a container or barrel with equal parts water and let stand for three months.

## With massive amounts of seaweed washing up, persons are experimenting with ways to use it to their advantage. (A.Miller/BGIS)

use it to their advantage. (A.Miller/BGIS) Making organic mulch is another way to use the seaweed in agriculture. The organic mulch is a protective layer covering the soil which can help with weed control, increase moisture retention, and promote healthy soil. After ensuring that all the salt has been washed off, a 2-3 inch layer of seaweed should be applied over the soil.

With the knowledge that Sargassum seaweed can be put to good use, Barbadians seemed less apprehensive about it. Nevertheless, as the deputy, director of the CZMU, Dr. Lorna Inniss, stressed: "we need all hands on deck" if we are to rid the beaches of this threat.

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