

Utilizing seaweed

to improve acidic red clay soil and preserve coral reefs

Background

Childhood in Kochi



- Characteristics of Palau's red soils

(Deenik, J, 2011)

- Degradation of coral reefs due to terrestrial sedimentation

(The nature conservancy, 2022)



- Seaweed constituents

(Suzuki,Y,et al, 2006/
Yomiuri Shimbun Online, 2024)

- Seaweed growth on coral reefs

(National Geographic, 2022)

- Food self-sufficiency rate in Palau

(AMITA CORPORATION, 2021)



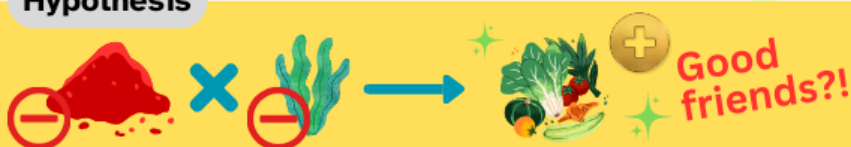
Research question

Two enemies!?

How can we improve acidic red clay soils?
How can we conserve coral reefs?



Hypothesis



Mixing red soil in Palau with seaweed that prevents coral growth could produce sustainable soil improvement.

Experiment A: Lettuce cultivation

the soil improvement effects of seaweed on acidic red clay soils



Experiment B: Fieldwork in Palau

the use of seaweed, agricultural practices and perspectives on crops in Palau

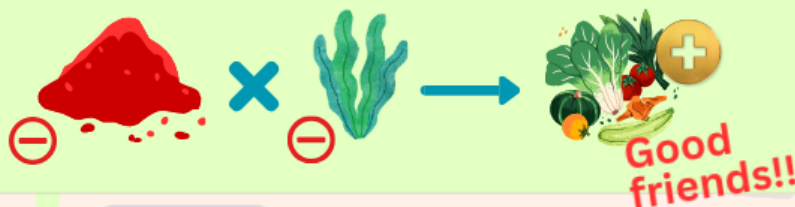


Discussion

good fertilizer

easy to introduce

meet demand



Implications and Limitations

effects in real environments and for coral reefs

experimentation in Palau and spreading this idea



Reference

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