Sargassum as a Fertilizer for Plants

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Sargassum Seaweed

Problem

Resource

Macronutrients

Micronutrients

Growth regulators
How can we add to our soils?

Mulches

Soil mixes and composts

Extracts

http://www.reddiamondcompost.com/
Research Aim: Generate evidence for use of Sargassum as Fertilizer

- Small field plots: Investigate effects of temporary exposure to fresh Sargassum mulch
- Potted plants: Determine effects of mulch decomposition stage (age)
- Potted plants: Effects of 3-months old Sargassum mulch
- Potted plants: Examine possible interactive effects of:
  - Mulch and inorganic fertilizer
  - Extract and inorganic fertilizer
Conclusions

• Fresh Sargassum seaweed mulch (washed or unwashed) can lead to soil salinization
• Soil moisture content, soil biological activity and plant growth were enhanced by Sargassum mulch
• The 3-months-old mulch performed best compared to fresh or 8-month-old Sargassum
• Plant tissue moisture content was increased by Sargassum mulch over that of an inert mulch
• Sargassum mulch & biostimulants can potentially reduce the need for inorganic fertilizers
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