



# Seaweed Quality: Chemistry and Effectiveness



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The James  
**Hutton**  
Institute

**SSIA Conference, Oban, 12<sup>th</sup> November 2025**

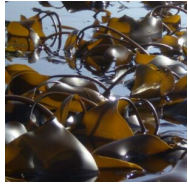
# Seaweed Research Areas



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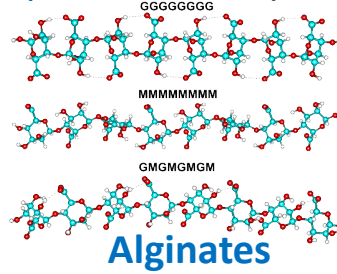
Raw Material

Products



Inputs

Co-products?



**Fucoidans**

**Mannitol**

**Heavy metals**

**Iodine**

**Protein**

**Essentials**

**Analytical know-how**

**Circular Economy**

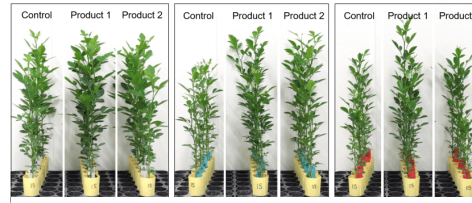
**No Wastes**

**Biorefining**

**Efficacy**

**Lab - Greenhouse -**

**Field trials**



**Biostimulants/ Fertilisers**

**Alginates**

**Elements (N/P/K/S...)**

**Phytohormones**

**Polyphenols**



**Food/ Feed Products**

**Minerals**

**Fats**

**Polysaccharides**

**Protein quality**

**Heavy metals/ Iodine**

**Methane reduction**

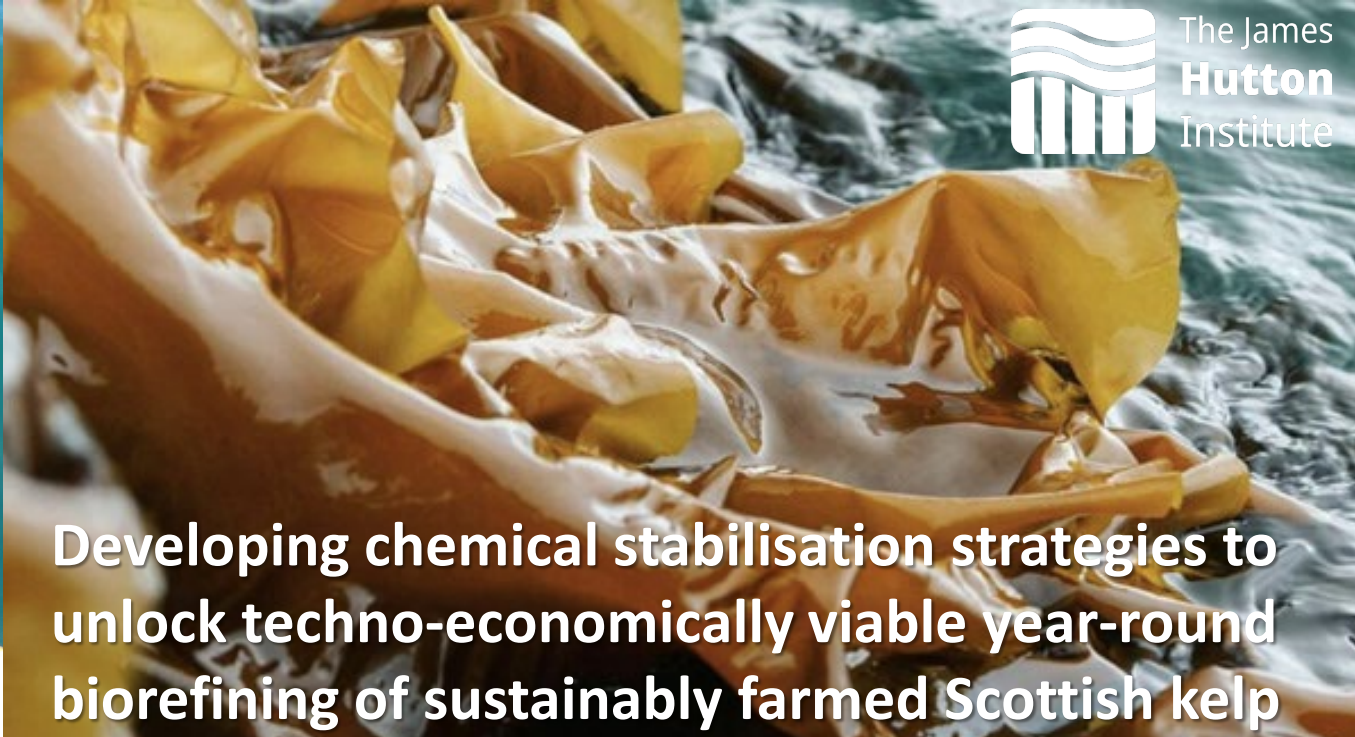
**Seasonality/**

**Location/ Storage/**

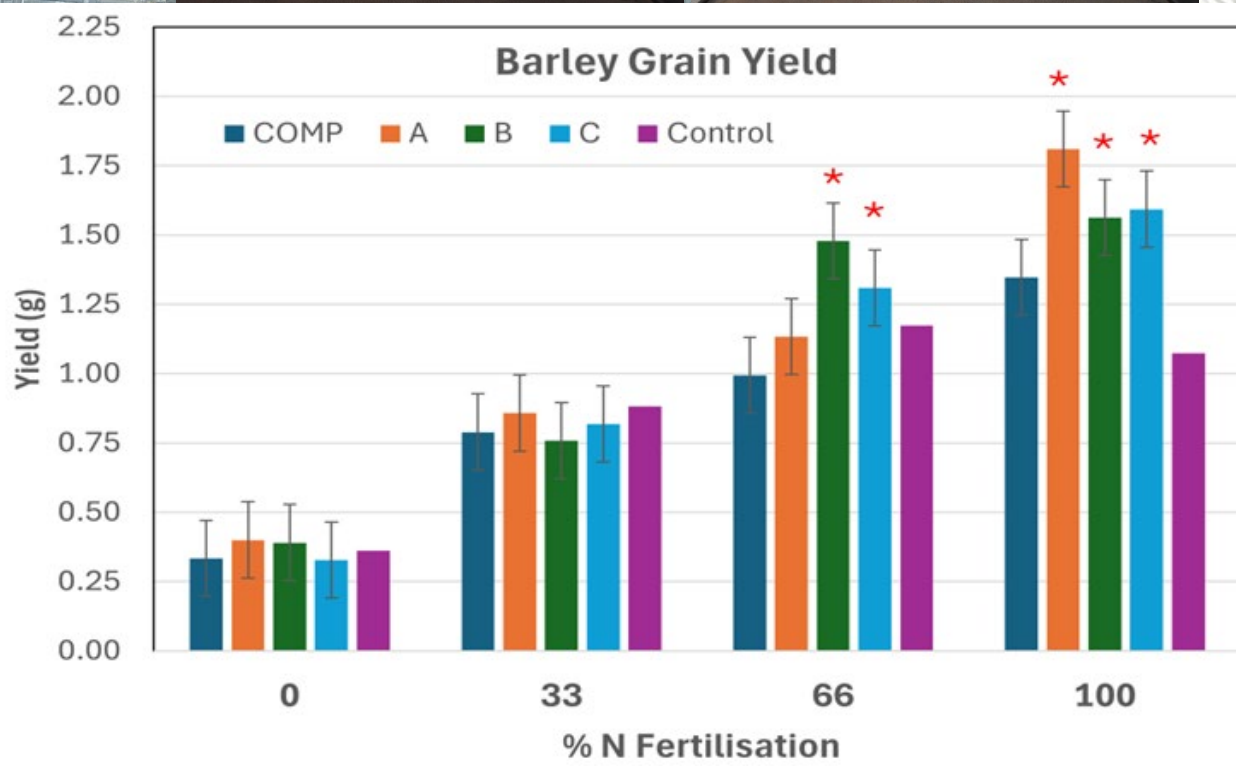
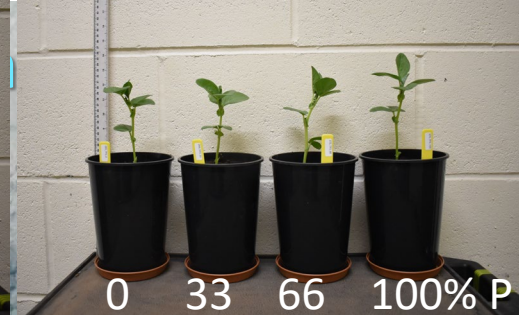
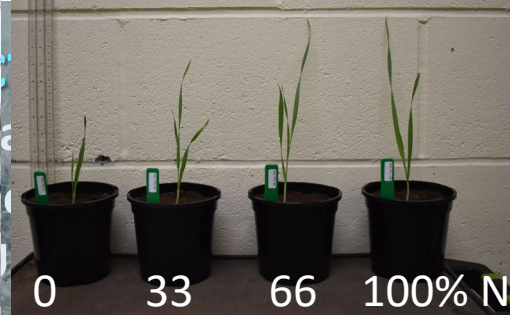
**Stability**











# Other seaweed projects

- **Kelp Crofters Ltd** – providing analytical support to Innovate UK project on seaweed biostimulants development
- **SeaDyes® Ltd** – helping a fully integrated spin-in with the Hutton developing a scalable and fully traceable seaweed-based dye innovation for fashion and textiles with environmental and economic benefits
- **Continuing work** confirming composition for seaweed producers and processors
- **Field trials for seaweed biostimulant properties**

Thanks for the hard work of the PBFQ team,  
Prof. Tim George, Lawrie Brown and Susan Mitchell

