

# Algal Bioproducts



(Image courtesy of Dr. Cayne Layton, UTAS)

## Bioproducts (Protein and Polysaccharide) Isolation from Native Irish & New Zealand Macroalgal Species

Global demands on food have risen with global population. With almost 8 billion people on the planet food shortages are now of major concern. Teagasc is a world leader in food and agriculture research addressing this very issue. Teagasc has been working to reduce the dependence of grazing animals on a grass diet. As part of the Bioscience group at Teagasc, this project aims to produce alternative food sources to supplement a grazing animal's diet. This will be achieved by using native seaweeds from Ireland and New Zealand. The seaweeds are a rich source of useful nutrients. This study concentrates on two food groups essential to grazing animal diets, proteins and carbohydrates. The study has two phases, the first to improve the amount of protein and carbohydrate the seaweeds produce, by changing their growing conditions. The second is extraction once the seaweed is ready, extraction will be optimised to improve how much protein and carbohydrate can be extracted, and its quality. This extraction process will be achieved using state of the art equipment at Teagasc which is scalable and economical, to enable not only the increased quality of the products called collectively 'bioproducts', but also to reduce the use of harmful chemicals needed.

**Project Duration:** 36 months (18M Cawthron Institute + 18M Teagasc)

**Collaborating Institutions:** Teagasc Ashtown Food Research Centre, Ireland  
Cawthron Institute, New Zealand

### Project Team:

#### RL2025 Fellow

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