BLUE ECONOMY
COOPERATIVE RESEARCH CENTRE

Australian Government
Department of Industry, Science and Resources

Cooperative Research Centres Program

Developing at-sea methods for the cultivation of bull kelp (Durvillaea spp.)

Summary

This project will focus on developing methods to out-plant hatchery-reared Durvillaea (Bull Kelp) to grow-lines at-sea, fine tune hatchery methods and test the growth and performance of Durvillaea on grow lines at different sites.

There is a strong market for Durvillaea due to its exceptionally high levels of alginates (up to 50% of dry weight) and presence of plant biostimulants. However, supply limitations persist.

Currently, only beach-cast Durvillaea can be harvested in Australia and the availability of beach-cast Durvillaea is declining. Consequently, there is a strong need to develop commercial Durvillaea aquaculture to meet the demand. Furthermore, assessing the feasibility of Durvillaea aquaculture in offshore waters is crucial.

In the previous 12-month project we developed reproducible hatchery methods and performed preliminary trials of outplanting. The important next stage in establishing commercial Durvillaea aquaculture is the successful outplanting of hatchery-reared juveniles to grow-lines at-sea. Because Durvillaea has a different life-cycle and type of holdfast to other kelp, the existing methods widely used for at-sea attachment require modification.

In this 2-year project we will focus on developing outplanting methods by testing a range of factors that influence attachment success: the substrate; methods of attachment; timing (season) of outplanting and preconditioning hatchery-reared juveniles.

The outcomes of the project will contribute to the goal of growing commercially viable Durvillaea.

Project ID
2.24.001

Research Program
RP2 Seafood & Marine Products (ORES) Program

Project Leader
Jeff Wright

Duration
24 months

Partners
- Auckland University of Technology
- SeaSol
- Southern Ocean Carbon Company
- UTAS

The Blue Economy CRC is funded in part under the Australian Government's CRC program administered by the Department of Industry, Science, Energy and Resources.