

## Seaweed Development Services

---

### Project Outline:

The BIM work programme has centred on developing hatchery culture techniques for species of interest such as *Laminaria digitata* and *Alaria esculenta*, which can be considered achieved, also *Saccharina latissima*, still challenging and on the red weeds, *Porphyra umbilicalis*, also challenging, and *Palmaria palmata*, which can be considered sorted out for vegetative tank culture only. BIM has produced Aquaculture Explained manuals for *Laminaria* whose culture techniques mirror *Alaria*, and also for *Palmaria*.

In 2022 it is proposed to have a further production run of *Alaria* and *Saccharina* in line with early recommendations from the 2021 Seaweed Strategy (under development), but also as part of a handover to the commercial sector of production of species with established hatchery techniques. The 2022 work programme outputs will allow for continued trialling of sites and new sites coming into production. Further technical work is required to perfect the production technique for *Saccharina*. Training and technique hand-over to industry (via SOPs, mentoring, and practical videos) are required for industry in 2022 to enable them to produce their own seed stock. A blue-print for a macroalgal hatchery and sea-site to establish the state of the art and associated costs should be developed in 2022. The work will require access to a fully licensed and equipped seaweed hatchery, it is also proposed to hold an industry workshop.

Given the lack of success in locating asexual *Porphyra* plants in 2021 it is planned to concentrate efforts on the north coast only in early spring 2022 to locate new product for sporulation attempts.

### Project Objectives:

- *Saccharina sori* induction, chlorination (sterilisation) and sporulation, active and passive seeding, spring/summer deployment for sea growth trials to enable a summer crop.
- Conduct survey for new asexual *Porphyra* stock on north coast/sporulate plants and settle on media.
- *Alaria* production on collector string via industry mentoring to enable continued growth trials at sea during autumn.
- Technology transfer for all interested industry participants in-person and/or via webinar/video.
- Hatchery production step by step guide on cultivation techniques.
- Hatchery blue-print suggested design plus associated costs.
- Sea-site blue-print suggested design plus associated costs.
- Algae workshop.

### Expected Benefits:

- Techniques established for cultivation of *Saccharina*.
- New asexual *Porphyra* stocks located for sporulation trials and settlement on media.
- Seeded collector string deployed at eight licensed sea sites 2022/2023.
- Technology transfer via in-person and webinar/video as required to enable sector to take on hatchery techniques.
- Accompanying hatchery procedure manual written allowing industry to understand procedures.
- Hatchery design and cost document produced to guide industry in setting up own hatcheries.
- Sea-site design and cost document produced to guide industry in setting up own sea-sites.
- Algae workshop held to bring the sector together in a cohesive and co-operative fashion to build synergies and gain momentum.

**Projected Cost:** €247,867