

## Assessing New Technology for the Pelagic Sector

### Project Outline:

BIM proposes to work closely with the pelagic sector to progress assessment of 'Tempering' and 'Individual Quick Freezing' (IQF) technologies, which have the potential to extend the processing season and, enable production of higher value products respectively. In addition automated mackerel pin boning trials will be progressed and air-drying of blue whiting will be investigated to gauge commercial potential.

### Tempering

Traditionally, tempering (i.e. freezing and subsequent defrosting of large volumes of pelagic product for subsequent value-add processing) has presented quality, value loss and efficiency issues for the Irish pelagic processing sector. However, a variety of larger-scale efficient tempering technologies have emerged that allows frozen product to be defrosted in a controlled manner that reduces costs and retains product quality. These technologies are expensive, and a comprehensive appraisal of relevant technologies is required by third party experts to determine which are most applicable to complement existing Irish pelagic processes. Three different tempering solutions will be trialed in pelagic processing plants to determine effectiveness and allow processors view first-hand operations and benefits.

### IQF

Individual Quick Freezing (IQF) is emerging as a preference for B2B customers as it offers them the convenience to split batches more readily and cheaply for the subsequent production of consumer value-add product offerings. This technology is well established in higher-value shellfish and whitefish sectors. However more recently larger-scale pelagic processors have been adopting this as a premium offering for customers. AN IQF system is being installed for trials in Killybegs and a suite of pelagic species and associated formats will be trialled to determine effective processes and product specifications. Markets will be engaged to determine opportunities and potential ROI in pursuing opportunities commercially.

### Automated mackerel pin-boning

The delivery of an automated pin-boning solution is currently being progressed at a pelagic processing plant in Killybegs. During 2021 a suite of pin-boning prototypes will be assessed, and the best-fit solution will be progressed and scaled up to deliver a commercial solution. Showcase trials will also be organised to allow all pelagic processors nationally to view the chosen technology and provide feedback on effectiveness and product specifications including quality, yield and capacity. Customer engagement will be a priority focus both nationally and internationally. And the potential implementation of these technologies in addition to IQF and tempering will be set out.

### Air-drying of blue whiting

Small scale trials conducted during 2019 and early 2020 revealed that good quality 'bacalao' type product could be produced from blue whiting. The process is energy demanding, however there is a vast quantity of latent energy from refrigeration processing in Killybegs. The potential to harness this energy in air-drying process will be investigated and a commercial system will be scoped and costed to establish if a viable business case exists for progressing air-drying of blue whiting.

### Project Objectives:

This project will deliver on the following objectives:

- Progress assessment of three tempering technologies and IQF trials conducted through third party experts in Killybegs.
- Determine best-fit business cases for progressing tempering and IQF for the pelagic sector.
- Assess the most effective automated mackerel pin-boning solution and gauge market interest in product.
- Progress air drying trials of blue whiting and determine the commercial potential.

**Expected Benefits:**

- Pelagic processors informed of best-fit tempering and IQF technologies.
- Automated mackerel pin-boning solutions progressed,
- Air drying of blue whiting opportunities defined.
- Pelagic processors enhanced understanding of commercial benefits of tempering and IQF technologies, automated mackerel pin-boning, and air-drying of blue whiting.
- Accelerated uptake of tempering, IQF, automated mackerel pin-boning, and air-drying of blue whiting technologies by Irish pelagic processors.
- Potential extension of processing season by adopting technologies.
- Enhanced competitiveness in the medium to long-term.

**Projected Cost: €280,000**