

Preliminary Seed Mussel Survey Report for the South Glassgorman Bank Area – 29/06 to 1/07 and 13/07 to 15/07/2021

Methodology: Acoustic data collection using 400 kHz side scan sonar, data processing on SonarWiz 7 and ground truthing of acoustic targets with a 1 meter dredge (Van Lancker et al., 2007; van Overmeeren et al., 2009).

Area surveyed: South of the Glassgorman Bank east of Courtown, Co. Wexford (see map)

Survey results:

Acoustic data was collected in the area covering the 2015 and 2017 seed mussel settlement in the location. Two distinctive areas presented potential seed mussel bed features. The area with the more pronounced features represent approximately 39 hectares. An accurate footprint could not be generated at the time of the survey for the second area, the seed mussels appear to be very scattered on the seabed. However, they are spread over an area of 30.5 hectares approximately.

Table 1: Areas coordinates (in Degrees, Decimal minutes and WGS84 projection)

Area 1 (39 hectares)

Latitude	Longitude
52° 37.102' N	6° 9.104' W
52° 37.140' N	6° 8.878' W
52° 36.867' N	6° 8.600' W
52° 36.429' N	6° 8.558' W
52° 36.366' N	6° 8.913' W

Area 2 (30.5 hectares approx.)

Latitude	Longitude
52° 37.375' N	6° 9.900' W
52° 37.803' N	6° 9.852' W
52° 37.811' N	6° 9.550' W
52° 37.333' N	6° 9.560' W

NOTE: The seed beds displayed on the attached map has been established following verification by ground- truthing of the side-scan sonar data. These coordinates represent the corners of a simplified polygon of the area of the possible settlement identified (yellow boxes on the map).

According to the acoustic data, and the extensive sampling carried out in the area (6 tows and 15 grabs), the seed does not appear to be forming large aggregation, however it is still early in the season to formulate full conclusions. The other area appears to be more scattered as the 10 grabs collected in the possible bed did not show any evidence of seed. Nevertheless, further investigation using the dredge (14 tows) confirmed the settlement. Most tows in the area only contained from a quarter to a half dredge of seed, while few full dredges were recovered in the other settlement.

At the time of the survey, the seed size ranged from 5 to 26 mm with sizes nearly evenly distributed throughout the sample (200 individuals).

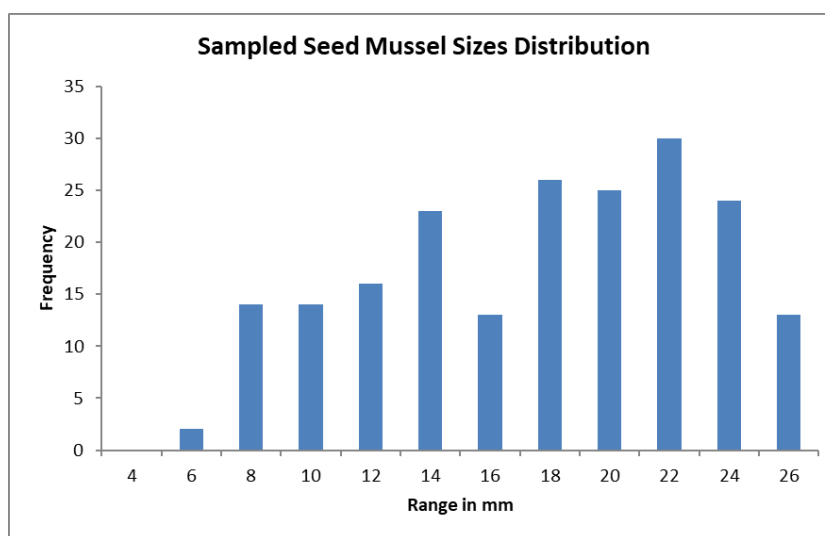


Fig. 1: Size (length) distribution on the Glassgorman settlements

The average size at the time of the survey was **16.60 mm (maximum: 25.98 mm, minimum: 4.94 mm)**. According to the size distribution graph and the size range, it appears that the recruitment at this location happened over several weeks.

Although some starfish were observed on the edges of each settlement, the seed does not appear to be in direct threat. The level of bycatch at the time of the survey were low and mainly composed of byssus threads mattings, gravel, mud/silt, few small whelks and a mix of hydroids and bryozoans.



Fig.2: Example of seed mussel found on the south area.

Summary:

Two potential seed mussel settlement were found within the surveyed area. Both presented low seabed cover and a wide size range. No estimated tonnage survey was carried out due to the time of year and the size range of the seed. Estimation at this stage would not be representative of the actual available biomass as the seed still has a lot of time to develop and grow. It is expected that mussel coverage on the seabed will extend prior to the opening of the fishery (Capelle et al., 2014). A further survey is planned on the settlement to assess possible alien invasive species. A full biomass estimation survey will be carried out closer to the opening of the fishery.

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References:

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Preliminary Seed Survey Map of The South Glassgorman Bank Area - June/July 2021

