

Not to be cited without reference to the Laboratory

CHARTER FISHING VESSEL "KESTREL" INS253

Ref NO9

CRUISE IN COOPERATION WITH SFIA

Report

1-10 April 1990

Personnel

J Arkley (SFIA)

J Main SSO

R Kynoch ASO

Objectives

To fish a seine net using three sizes of codend: 90 mm x 120 meshes round, 110 mm x 100 meshes round and 90 mm x 100 meshes round.

To collect: a) selectivity data for the three codends using a small mesh cover; and b) discard data for the two codends with 100 meshes round, without the codend cover.

Narrative

The scientific staff joined the "Kestrel" in Peterhead on 1 April and prepared the codends and cover before sailing for the fishing grounds. Fishing commenced 40 miles NNE of Fraserburgh using a Harvester trawl fitted with rockhoppers. Although weather conditions were sometimes very poor, no time was lost during the fishing period. The cruise ended in Peterhead on 10 April.

Results

All the objectives of the cruise were met.

The size range of haddock on the fishing grounds adequately covered the selection range of the codends. There were, however, few whiting above the 50% retention length.

The selection parameters calculated from a preliminary analysis of the data are given below:

Mesh size (mm)	90	90	110
No of meshes round	120	100	100

Haddock

No of hauls	4	2	4
50% retention length (cm)	23	25.4	26.2
Selection range (cm)	6.1	4.7	8.2
Selection factor	2.65	2.82	2.52

Whiting

No of hauls	4	4	4
50% retention length (cm)	29.2	30.3	32
Selection range (cm)	9	5.9	19.6
Selection factor	3.36	3.37	3.08

The catches from the 90 mm x 100 mesh and 110 mm x 100 mesh codends, when fished without covers, were also compared. Too few whiting were caught to make valid comparisons but sufficient haddock were caught in eight hauls using the 90 mm x 100 mesh codend and in 12 hauls using the 110 mm x 100 mesh codend. The numbers of haddock caught in each haul will be dependent on the population available on the grounds and will therefore vary substantially. In the circumstances prevailing, there was a 66% reduction in numbers of haddock below the minimum landing size of 30 cm when the 110 mm x 100 mesh codend was used compared to the 90 mm x 100 mesh codend. This was statistically significant at the 95% confidence level. There was also a reduction in numbers of marketable haddock above or equal to the minimum landing size but this was not statistically significant at this level.

More detailed analysis is being done.

J Main

6 June 1990