

Dangerously small

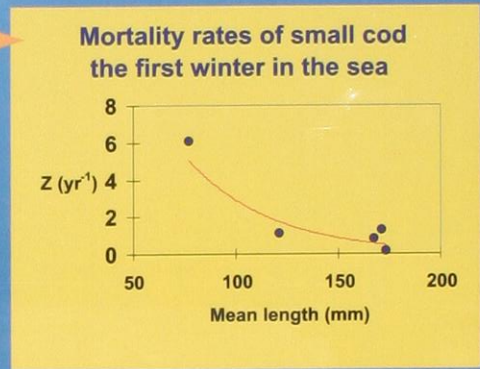
Size-dependent mortality of released cod

Tore S. Kristiansen, Håkon Otterå, and Terje Svåsand

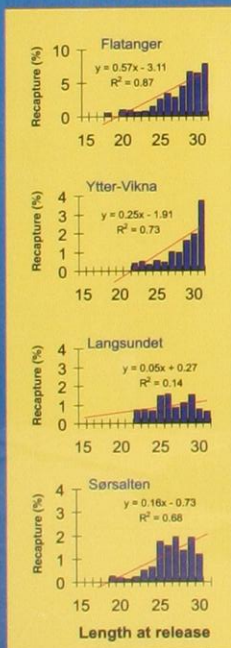
The effects of size at release on survival and recapture ratio were studied in various areas in Hordaland and Nord-Trøndelag County, Norway. The survival increased strongly with size at release, but mortality rates varied significantly between areas.

Mortality of groups of reared cod with mean lengths 8cm, 12cm, and 17cm, released into a small fjord in Hordaland

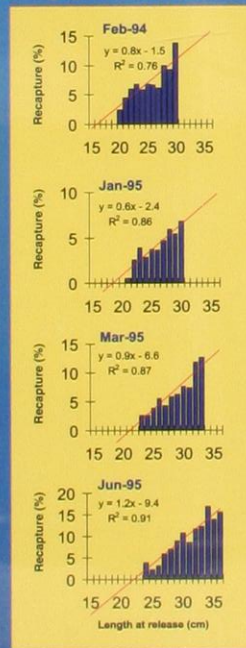
Groups of reared 0-group cod were marked (alizarin, oxytetracycline or anchor-tags) and released between July and November. The survival to April next year was estimated by Ricker 2-release method, based on fishing surveys. The survival estimates varied from 1.1% of the smallest group to 92% of the largest. There was, however, no significant difference between mortality rates of the 12cm group and the 17 cm groups.



Nord-Trøndelag



Langøysund, Hordaland



Size-dependent recapture ratio of individual tagged reared cod released in outer coastal areas.

Length at release and recapture ratio showed strong positive correlations in most areas and also in different releases in the same area. The differences in recapture ratios were caused by both higher mortality rates of small cod and by the longer time spent in the sea before recruitment to the fishery. The regression lines on the figures indicate very few recaptures and very low survival of cod less than 20cm at release in these areas. This has been confirmed by release experiments with smaller cod.

Within an area, the size at release was the most important factor determining recapture ratios of reared cod.

