Survival of sea-water-adapted trout, Salmo trutta L. ranched in a Danish fjord - DTU Orbit

Survival of sea-water-adapted trout, Salmo trutta L. ranched in a Danish fjord

The effect of seawater adaptation on the survival of coastally released post-smelt trout, Salmo trutta L., was investigated by release: (1) directly (with no adaptation); (2) after retention in net pens in the sea for 29-131 days (delayed release); (3) after feeding with a high salt diet (12-13.5% NaCl) for 4 weeks; and (4) after a combination of (2) and (3). In total, 17 640 trout (age = 1+, 1.5 and 2+ years; mean fork lengths = 18.2-25.6 cm) were released in 14 batches in the summer or autumn months of 1986-1989. All fish were of domesticated origin and Carlin tagged. Survival and instantaneous mortality rates (total and fishing mortality) were estimated from reported recaptures. Mortality rates were estimated for: (1) the post-smelt period; (2) the period until the legal size of capture (40 cm) was attained; and (3) for larger sea-trout. Release with a delay of 4 weeks gave an increased survival rate. A longer adaptation period did not increase survival. On average, survival was increased by 36%. Survival was not increased by high-salt diets. Until attainment of the legal size for capture, survival was 9.6% higher on average, with extremes as low as 1.7% and as high as 38% in individual batches.

General information
Publication status: Published
Organisations: Section for Freshwater Fisheries Ecology, National Institute of Aquatic Resources, Institute Management
Contributors: Pedersen, S., Rasmussen, G.
Pages: 295-303
Publication date: 2000
Peer-reviewed: Yes

Publication information
Journal: Fisheries Management and Ecology
Volume: 7
Issue number: 4
ISSN (Print): 0969-997X
Ratings:
Scopus rating (2000): SJR 0.426 SNIP 0.677
Web of Science (2000): Indexed yes
Original language: English
Source: orbit
Source ID: 227125
Research output: Contribution to journal › Journal article – Annual report year: 2000 › Research › peer-review