

— Light intensity affects growth and sexual maturation of Atlantic salmon (—



The aim of the present study is to test the extent to which different intensities of continuous additional light affect somatic growth and sexual maturation in Atlantic salmon postsmolts in sea cages. Postsmolts (9 200 individuals) were randomly distributed among four commercial sized sea cages and exposed to either natural light or natural light + continuous additional light of low, medium or high intensity from January to June. In May the high light intensity group had a significantly higher mean live body weight than the other groups, and at the end of the experiment in June, all groups differed in mean gutted weight. There was a positive logarithmic regression between level of light intensity exposure during night and mean gutted weight. A small proportion of fish matured sexually (after 1.5 years in seawater) in the natural light group, whereas no maturation was detected in the light groups. These results suggests that to affect growth and proportion or maturation in Atlantic salmon by additional light, there might be different threshold values of light intensity.

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Obtenir le document : EDP Sciences

Mots clés : postsmolt, growth, sexual maturation, light intensity, photoperiod, post-smolts, croissance, maturité sexuelle, intensité lumineuse, photopériode

Thème (issu du Text Mining) : MILIEU NATUREL

Date : 1997-11-15

Format : text/xml

Source : <https://doi.org/10.1051/alr:1997038>

Langue : Anglais

Télécharger les documents : <https://www.alr-journal.org/10.1051/alr:1997038/pdf>

Permalien : <https://www.documentation.eauetbiodiversite.fr/notice/light-intensity-affects-growth-and-sexual-maturation-of-atlantic-salmon0>

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