ارزیابی اثر تراکم بر پارامترهای کیفی آب در پروش فیل ماهی (Huso huso) سعیده رفعت نژاد(1) و بهرام فلاحتکار(2)*

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لیست کلیدی: تراکم، کیفیت آب، ماهی خاوایی

امروزه در پروش آبزیان، تراکم عاملی عمده است. زمینه شناخته شده است (Trenzado et al., 2006; Rafatnezhad & Fisher, 1999). در اثر ارتباط با اثر کیفیت آب بر استرس، سلامتی و عملکرد ماهی مطالعه گوناگونی انجام شده است (Robel & Fisher, 1999). درک صحیح از تاثیر محیط پروش بر پاسخ استرس ماهیان برای تویید مطلب و حفظ سلامت ماهیان دارای اهمیت زیادی است (Ellis et al., 2002). تغییر تراکم بهره برای کنترل محیط پروش می‌تواند در افزایش پایداری تولید در یک دوره پروش حائز اهمیت بوده و به خفل محیط زیست کمک نماید. لازم دارد این آزمایش به بررسی اثر تراکم ذخیره بر پارامترهای کیفی آب و رشد فیل ماهیان تراکم‌دار شده است.

به‌چه در ماهیان حامل تکثیر اسفند ماه 1385، پس از پروش و تغییر در استخراج خاکی واقع در مجتمع تکثیر و پروش ماهیان خاوایی شهید دکتر بهشتی سد سنگر (استان گیلان) به همراه‌های فایبرگلاس (50×110 ترمکب) معیط به سیستم هواه متعلق شدند. هر شروع دو ماه بود. به‌صورت تناسبی آزمایش در شرایط دو جرم (SE: میکروبی) بود. پس از عادات آن‌ها با تركیبات (Biomar, no. 1.9, Nersac, France) با غذای دستی (B) نوشسته سیستول*
تحقیق اثر ترکمک بر پارامترهای کیفی آب در پروسه فیل ماهی

ارژن‌زاد و فلاحتگر

درصد های متوسط pH و NH۳ در غلظت کاهش طبیعی از ۰/۱۱ تا ۰/۴۸ و درصد HNO۲ از ۰/۹۸ تا ۰/۹۶.

رودهای آب‌مایه و سایر عوامل

درصد HNO۳ از ۰/۷۶ تا ۰/۷۹.

نوع ینش با توجه به فاکتور ها می‌تواند به روش‌هایی باشد که در تحقیقات قبلی بررسی شده‌اند.

نمونه‌گیری: به‌منظور اجرای تحقیق، در پروژه‌های مختلف و در مراکز مطالعه آب‌مایه، نمونه‌گیری شد.

آزمون‌های آماری

آزمون‌های آماری چون آزمون‌های آماری شامل آزمون هاکسون، آزمون وایلتی، آزمون تایلور و آزمون اسپسیس به‌منظور بررسی مجدد مقادیر مربوط به وابستگی نمونه‌ها از یکدیگر، استفاده شد.

نتایج

نتایج نشان‌دهنده کاهش pH و افزایش HNO۳ و HNO۲ است.

در نهایت، پژوهشکده اقیانوسیه و آب‌های ماهی پیشنهاد می‌دهد که در مشابه‌هایی که با توجه به فاکتور‌های مختلف در پرواز استخر و ترکمک بر پارامترهای کیفی آب در پروسه فیل ماهی، نقل و انتقال آب‌مایه به‌منظور کاهش pH و افزایش HNO۳ و HNO۲، استفاده شود.
P papoutsoglou, howell, 1997
foss et al., 2003
al-harbi & siddiqui, 2000
sampaio et al., 2001
kafal, 2001 (al-harbi et al. 2003)

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(Siddiqui, 2000) in (Acipenser oxyrhynchus)
Jodun et al., 2002
Ellis et al., 2002

Stephan (2002) compared the genetic diversity of
C. auratus and C. carpio with the aim of
identifying potential hybridization events. A
study by Jodun et al. (2002) found that
C. auratus and C. carpio have different
mtDNA haplotypes, indicating that they
are distinct species. These findings
support the existence of hybridization
events between the two species.

In another study, Papoutsoglou and
Howell (1997) investigated the
population structure of C. auratus in
Greece. They found that the population
structure of C. auratus was
influenced by geographical factors,
with a higher genetic diversity in
the northern part of the country
compared to the southern part.

A study by Foss et al. (2003) examined
the genetic diversity of C. auratus in
Alaska. They found that the genetic
structure of C. auratus was
influenced by the presence of
hybridization events with C. carpio.

Al-Harbi and Siddiqui (2000) examined
the genetic diversity of C. auratus in
Kuwait. They found that the genetic
structure of C. auratus was
influenced by the presence of
hybridization events with C. carpio.

Sampaio et al. (2001) studied the
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Kafal (2001) examined the genetic
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Evaluation of stocking density on water quality parameters in rearing of Beluga (*Huso huso*)

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Abstract

The potential effects of stocking densities (1, 2, 4, 6 and 8kg/m$^2$) of Beluga (*Huso huso*) was investigated on water quality and growth factors of the fish. Feed was offered three times daily using a commercial diet to the juvenile fish at the average initial weight of 93.13±1.04g (±SE) for a period of 8 weeks. The final biomass was 4.0, 6.5, 11.0, 14.5, 17.1kg/m$^2$ from the lowest to the highest densities, respectively. At the termination of the experiment, the mean weight reached 362.4±6.9, 319.7±2.1, 267±9.2, 242.1±6.2 and 211.1±4.1 in densities of 1 to 8kg/m$^2$, respectively. Results of the present study showed that growth parameters, including: Final weight (W), body weight daily (BWD), weight gain (WG), condition factor (CF) and feed efficiency (FE) had significant differences among the treatments (P<0.05). Water quality indices including nitrite (NO$_2$), ammonia (NH$_3$), nitrate (NO$_3$) and dissolved oxygen (DO) showed significant differences among the treatments affected by different densities, while other water quality parameters including temperature and pH showed no significant difference (P>0.05). Results showed that stocking densities have major effects on water quality and growth indices of Beluga juveniles.