عنوان مقاله:

The effects of Saccharomyces cerevisiae and probiotic bacillus on controlling mortality and production efficiency in Acipenser persicus and Huso huso in larviculture

محل انتشار:

اولین کنگره بین المللی مدیریت بهداشتی و بیماریهای آبزیان (سال: ۱۳۸۷)

تعداد صفحات اصل مقاله: ۱

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خلاصه مقاله:

Objective: One of the pathways for the entry of pathogenic bacteria into the sturgeon larvae and their heavy mortalities in hatcheries is via live prey, Artemia nauplii and Daphnia sp. In this study we studieded the role of microbial manegment on the controlling of live food microflora and modfying of it by bioencapsulation of Daphnia magna and Artemia urmiana with profitable microorganism in start feeding of Persian sturgeon (Acipenser persicus) and Beluga (Huso huso) larvae. We studied the potential of probiotic bacillus and Saccharomyces cerevisiae in decreasing of mortality and elevating of growth and production efficiency in these important sturgeons. Method & Materials: Daphnia magna and Artemia urmiana nauplii were bioencapsulated by Saccharomyces cerevisiae and the blend of B. licheniformis, B. subtilis, B. polymyxa, B. laterosporus and B. circulans in the suspension of ۱×۱۰۵, ۲×۱۰۵ and ۳×۱۰۵ cells/ml, respectivelty. Acipenser persicus and Huso huso larvae fed on the ۳۰% and ۵۰% of their body weight for ۶ times a day by bioencapsulated Daphnia magna and Artemia urmiana in two different trials, respectively. At the end of feeding trials, the body compositions, mortality rate and the production efficiency of sturgeon larvae were compared with the control treatment. Results & Conclusion: As a preventive measure against infections, the lives prey (Artemia and Daphnia) successfully cultured and bioencapsulaed with probiotics. The effect of yeast on declining of mortality and elevation of survival rate in Acipenser persicus was more than probiotic bacilli on Huso huso. While the production and growth conversion efficiency in beluga was higher than the Persian sturgeon. In the termination of experiment, the results indicated that the lowest mortality or highest survival rate (۹۲%) obtained in thevPersian sturgeon was fed on by bioencapsulated. Daphnia magna with ۲×۱۰۵ cells of yeast/ml. While the maximum of survival rate (۷۸.۶۷%) resulted in Beluga was fed on bioencapsulated Artemia nauplii by ۳×۱۰۵ bacillus/ml. Also the survival rate in Persian sturgeon fed on by bioencapsulated Artemia nauplii (۱×۱۰۵ cells/ml) was ۸۹.۵%. The probiotics had good effects on the promotion of body weight and length and thermal growth coefficient in experimental treatments. In all experiment trials, the survival rate had significant difference with control treatments. The present study highlighted that potential of probiotics via microbial manegement of live prey in the promotion of survival efficiency and growth of sturgeon larvae in hatcheries is very high.

کلمات کلیدی:

Sturgeon, Live prey, Bioencapsulated, Larviculture, Survival rate

لینک ثابت مقاله در پایگاه سیویلیکا: