عنوان مقاله:

Bacterial load of the Persian sturgeon (Acipenser persicus) eggs in Guilan Province of Iran

محل انتشار:

اولین کنگره بین المللی مدیریت بهداشتی و بیماریهای آبزیان (سال: 1387)

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خلاصه مقاله:

Objective: The mucosal surfaces of eggs and larvae are good substrates for adhesion and colonization by bacteria, some of which might damage the outermost layer of the egg, the chorion, by exoenzymatic activity. The possibility also exists that the bacterial epiflora might create lethal or sublethal conditions for the eggs by excessive oxygen consumption or production of toxic metabolites.It is evident that colonization of the egg surface by pathogens or opportunists may be detrimental and cause disease of eggs or larvae. In this study, the aerobic bacterial flora of eggs in Persian sturgeon, and their rearing water were investigated. Method & Materials: Samples of eggs, were washed three times in sterile neutral 0.9 % salt solution (NSS) to remove adherent bacteria, then homogenized together with 5 ml NSS. Homogenates were diluted in NSS and 0.1 ml volumes of appropriate dilutions were spread on the surface of TSA (tryptic soy agar). The plates were incubated aerobically at 20°C and inspected for 7-10 days. For bacterial loading in rearing water of eggs, 0.1 ml volumes of appropriate dilutions of rearing water were spread on the surface of TSA (tryptic soy agar), and plates were incubated by the same method. Results & Conclusion: The aerobic bacterial flora of eggs, and their rearing water were investigated during 2006-2008. Maximum and minimum of bacterial counts in eggs were 7.45±0.65, 5.97±0.77 log cfu/egg in 2006 and 2007, respectively. The mean of aerobic bacterial flora of eggs during 2006-2008 was 6.75±0.93 log cfu/egg. Bacterial counts of eggs in 2007 were significantly different from bacterial counts of eggs in 2006 and 2008 (P<0.01).The results showed existence of a significant relation between the bacterial counts of eggs, with pH(r = - 0.839) and EC (r = - 0.701) of rearing water. In the study of aerobic bacterial flora in rearing water of eggs, maximum and minimum of bacterial counts in rearing water were 6.41±0.55, 5.04±0.71 log cfu/ml in 2008 and 2007, respectively. The mean of aerobic bacterial flora of rearing water of eggs during 2006-2008 was 5.59±1.02 log cfu/ml. Bacterial counts of rearing water of eggs in 2008 (were significantly different from bacterial counts of rearing water in 2007 and 2006 (P<0.01.

کلمات کلیدی:

Persian sturgeon, bacterial load, hatchery, Acipenser persicus, eggs, rearing water