

Pengaruh penambahan tepung kuning telur dalam ekstender fish ringer pada preservasi sperma ikan nilem (*Osteochilus vittatus* Valenciennes 1842) terhadap persentase fertilisasi dan penetasan telur = The effect of egg yolk powder in fish ringer extender in preservation of nilem fish (*Osteochilus vittatus* Valenciennes 1842) on fertilization rate and hatching rate

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Abstrak

Ikan nilem sebagai ikan budidaya potensial perlu ditingkatkan produksinya, salah satunya dengan melakukan preservasi sperma. Preservasi sperma dapat dilakukan menggunakan kuning telur sebagai protektan, namun penggunaannya memiliki risiko kontaminasi mikroorganisme. Risiko kontaminasi dapat dikurangi dengan penggunaan tepung kuning telur. Penelitian ini bertujuan untuk mengetahui pengaruh tepung kuning telur dalam preservasi sperma ikan nilem pada suhu 4 oC selama 24 jam terhadap fertilitas dan penetasan telur serta mengetahui konsentrasi optimalnya. Sperma diperoleh melalui pemijahan buatan lalu diamati secara makroskopis. Sperma dipreservasi selama 24 jam pada suhu 4 oC dengan ekstender fish Ringer dan konsentrasi tepung kuning telur 0%, 0,5%, 1%, 1,5%, dan 2%. Pengamatan fertilitas dan penetasan telur dilakukan dengan melakukan fertilisasi buatan. Hasil pengamatan dianalisis dengan Uji Analysis of Variance (ANOVA) dan Uji Tukey. Hasil penelitian menunjukkan penambahan tepung kuning telur dalam preservasi sperma ikan nilem pada suhu 4 oC selama 24 jam mampu mempertahankan fertilitas (>75%) dan penetasan telur (>85%) ikan nilem dengan konsentrasi 1% menunjukkan hasil optimal yaitu fertilitas sebesar $98,75 \pm 1,22\%$ dan penetasan telur sebesar $97,91 \pm 2,35\%$.

.....Nilem fish is a potential species for aquaculture industry, therefore massive production is needed. Production of Nilem fish can be increased by sperm preservation. Sperm preservation can be done using egg yolk as protectant, but the risk of contamination by microorganism is high. Egg yolk powder can be used as an alternative protectant for preservation. The aim of this study is to examine the effect of egg yolk powder in maintaining sperm fertilization and hatching rate and to determine the optimal concentration of the egg yolk powder used for preservation in 4 oC temperature for 24 hours. Sperm was collected by artificial spawning then examined for macroscopic parameters. Preservation was done using fish Ringer as extender with 0%, 0,5%, 1%, 1,5%, and 2% egg yolk powder. The sperm was stored in 4 oC refrigerator for 24 hours. Fertilization was done to examine the fertilization and hatching rate. Data obtained from this study was analysed using analysis of variance (ANOVA) test and Tukey test. The result shows that the addition of egg yolk powder in nilem fish sperm preservation was able to maintain sperm fertilization (>75%) and hatching rate (>85%). The optimal concentration of egg yolk powder used in this study was 1% for both fertilization rate ($98,75 \pm 1,22\%$) and hatching rate ($97,91 \pm 2,35\%$).