

Accepted Manuscript

Cryopreserved rainbow trout semen can be used for the fertilization of up to 8000 eggs in a single application

Sylwia Judycka, Joanna Nynca, Ewa Liszewska, Stefan Dobosz, Mariola Słowińska, Rafał Różyński, Andrzej Ciereszko



PII: S0044-8486(17)32512-7
DOI: doi:[10.1016/j.aquaculture.2018.02.026](https://doi.org/10.1016/j.aquaculture.2018.02.026)
Reference: AQUA 633074
To appear in: *aquaculture*
Received date: 18 December 2017
Revised date: 12 February 2018
Accepted date: 17 February 2018

Please cite this article as: Sylwia Judycka, Joanna Nynca, Ewa Liszewska, Stefan Dobosz, Mariola Słowińska, Rafał Różyński, Andrzej Ciereszko , Cryopreserved rainbow trout semen can be used for the fertilization of up to 8000 eggs in a single application. The address for the corresponding author was captured as affiliation for all authors. Please check if appropriate. Aqua(2017), doi:[10.1016/j.aquaculture.2018.02.026](https://doi.org/10.1016/j.aquaculture.2018.02.026)

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Cryopreserved rainbow trout semen can be used for the fertilization of up to 8000 eggs in a single application

Sylwia Judycka^{a*}, Joanna Nynca^a, Ewa Liszewska^a, Stefan Dobosz^b, Mariola Słowińska^a, Rafał Różyński^b, Andrzej Ciereszko^a

^aDepartment of Gametes and Embryo Biology, Institute of Animal Reproduction and Food Research, Polish Academy of Sciences, Tuwima 10, 10-748 Olsztyn, Poland.

^bDepartment of Salmonid Fish Research, Inland Fisheries Institute, Rutki, 83-300 Żukowo, Poland.

*Corresponding author: Tel. (+48) 89 539 31 59

E-mail: s.judycka@pan.olsztyn.pl (S. Judycka)

Abstract

Here we aimed to test the fertilizing ability of cryopreserved semen of rainbow trout (*Oncorhynchus mykiss*) during the fertilization of between 500 and 8000 eggs, thus establishing the optimal number of eggs to use in a single application of cryopreserved semen. The cryopreservation procedure resulted in a high post-thaw sperm motility (~70%). The fertilization rates ranged from 29 to 92% and did not differ depending on the number of eggs used. However, we did detect high and significant variability in fertilization rate among the pools of cryopreserved semen. Our results show that the cryopreserved semen of rainbow trout can be used to fertilize up to 8000 eggs in a single application. Cryopreserved sperm can be potentially implemented into breeding programs based on the crossing of selected males with individual females after confirmation of the rearing performance of larvae. Further studies should now focus on the cause of the between male variability in fertilizing ability observed in this study.

Download English Version:

<https://daneshyari.com/en/article/8493318>

Download Persian Version:

<https://daneshyari.com/article/8493318>

[Daneshyari.com](https://daneshyari.com)