

Triploidy induction by heat-shock treatment in red tilapia

Type: Article

Abstract:

The possible use of sterile triploid red tilapia is an interesting option for culture due to their proliferating breeding activities. The aim of the present study was to investigate and optimize the time of heat-shock treatment to prevent second polar body extrusion from the newly fertilized eggs of red tilapia, to produce a maximum number of triploid individuals. Heat-shock treatment was applied at a temperature of 41 degrees C for a total duration of 3.5 minutes after 2, 3, 4, 4.5, 5 and 6 minutes of fertilization. The best survival rate (67.0%) and triploid percentage (89.7%) was observed for the treatment at 4 minutes after fertilization. It is thus successfully demonstrated that 4 minutes after fertilization was the most suitable timing of heat-shock treatment for second polar body retention in newly fertilized eggs of red tilapia.

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