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3:30 - 3:50

***Effect of varied milt volume on the fertilization success of the Kamloop and Erwin strains of rainbow trout eggs.***

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Opinion varies among fish culturists and researchers alike regarding ratios of milt, diluent and eggs necessary to obtain optimal fertilization success in rainbow trout (*Oncorhynchus mykiss*) and other salmonids. Concern over what is “minimal” and “excessive” in terms of milt volume has prompted this study. Fertilization success in Kamloop strain rainbow trout was compared at “increased” milt application rates of 5 and 10 times the control amount of milt normally used at the Ennis National Fish Hatchery, Montana. In another test using the Erwin strain of rainbow trout, fertilization success was compared at “reduced” milt concentrations of  $\frac{1}{2}$  and  $\frac{1}{20}$  of amounts normally used. In this test five different diluents were tested at each milt concentration. Fertilization success was not significantly different ( $P>0.05$ ) with any of the milt concentrations used with either strain of fish. Among the five diluents tested at two different milt concentrations, only water was significantly different ( $P>0.05$ ). In normal spawning situations, concern about an “excess” or “deficiency” of sperm is probably unwarranted.