

Bellingham Technical College

Fisheries & Aquaculture Department
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The Bellingham Technical College, Whatcom Creek Hatchery and Bellingham Trout Hatchery have used moist air incubators for over 5 years to eye Chinook and Chum salmon eggs. Whatcom Creek is our water source for the hatchery, and after each rain has a high level of suspended solids (silt) because of all the construction along the creek. If we try to eye eggs in conventional incubators, the eggs suffocate. The moist air incubators allow us to eye eggs in full recirculation without using the creek water and eliminates the silt problem.

We eyed Chinook eggs using the trays that come with the incubators and kept the level of eggs below the lip of the trays after disinfection in PVP Iodine for 60 minutes. After the eggs water hardened (60 min), the eggs would swell up to the top of the trays. We would then remove the lids off of the trays and incubate.

We change out 5 gal of water each day. We would remove the eggs from the incubators when they accumulated the right amount of TUs (750 to 800) to shock and pick. We would average about 95% survival at that point.

The Moist Air Incubation has many applications. One unique example is when the Washington Department of Fish and Wildlife needed to slow the development of some Chinook eggs until they got some permits approved. We successfully used Moist Air Incubation to delay the development of the eggs to gain an additional 2 weeks of incubation time by using the built-in refrigeration to cool the eggs and thus delay their development. If we had not been able to do that, they would have hatched and not been able to be taken where they were intended to go. This was a major advantage in being able to change the time of hatch.

We have also eyed Chum eggs in the same manner as Chinook eggs. We had similar results with the same percentage of survival.

Our curriculum includes training students in the use of the moist air incubators as it is an accepted equipment utilized in State and Federal hatcheries. We give our students skills that can be used in industry which make them very employable. It is also important for them to see new technology used and be up to date in its use.

If you have any questions that I might be able to help you with, please feel free to contact me.

Earl Steele

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Whatcom Creek Hatchery
Bellingham Trout Hatchery