

December 2015

This is an article that was recently featured in the Fall 2015 Colorado Aquaculture Associations "The Fishline". It outlines the whole process involving the SLICE INAD Program we are currently trying to enroll in.

Treating Gill Lice Infestations

The parasitic crustacean *Salmincola* sp., commonly called "gill lice," can cause undesirable losses in fish, especially larger fish during the warmer months. The parasite can damage gills and cause production of mucus and inflammatory changes which make the fish less able to withstand warm water temperatures and low dissolved oxygen. Some fish can still tolerate the parasites as long as they are not further stressed, but catch and release activities, spawning, and other stressors can cause mortalities.

Articles appeared in the Colorado Aquaculture Association's Fishline in November of 1995 and June of 2008 discussing the parasite life cycle and control information. At that time, there was no drug available for treatment of the parasite and the only effective way to eliminate the disease in aquaculture situations was to depopulate and allow the facility rearing units to dry out or remain free of fish for several weeks. More recently, the drug emamectin benzoate (trade name SLICE) has been granted a compassionate exemption by the Food and Drug Administration (FDA) to control mortality in a variety of freshwater salmonids caused by *Salmincola*. This means that although the drug has not been approved for use in fish, the FDA is allowing legal use as long as the drug is used through the Investigational New Animal Drug (INAD) program. SLICE is a white powder that is milled into or top-coated onto feed for a seven day treatment. This article describes the step necessary to enroll in the INAD program and use SLICE on fish infested with gill lice.

The enrollment process is briefly outlined below with expanded details available in the information packet.

Step 1. Fill out a "Facility Specific Effluent related Treatment Information Required by FDA for Participation on SLICE INAD 11-370" table. The table is sent to the FDA Center for Veterinary Medicine (FDA/CVM) for their review/approval of your facility to participate under the SLICE INAD. This process can take 100-120 days for review and approval.

Step 2. Obtain approval from the Colorado Department of Public Health and the Environment Water Quality Control Division (CDPHE-WQCD) to use SLICE. Currently, there is no frame work for non-permitted facilities, but a letter stating this must be obtained from the CDPHE-WQCD.

Step 3. Once the FDA has reviewed and approved Step 1, you will then be able to enroll to participate in the INAD program to use SLICE.

Step 4. Once enrolled in the INAD program, the U.S. Fish and Wildlife Service (FWS) will send a cooperative agreement upon which participation is based and update the drug supplier and FDA/CVM

of your participation. The enrollment fee is \$700 per facility per year and the drug cannot be purchased from the drug supplier unless a facility is enrolled in the INAD program.

Step 5. Depending on the amount of drug used and the manner of its incorporation into feed (milled in to feed or top-coated), either the INAD office or the drug source (Merck Animal Health) can help make the drug available to you for the treatment.

Step 6. All Necessary reporting on the use of the drug must be entered into the INAD on-line database following a specific timeline. It is important to remember that use of SLICE in this manner if a “field trial study” to gather information for eventual approval of this drug and the study protocol must be followed. Participation in the INAD program is a privilege, and if the protocol is not followed or if reporting isn’t within the timeline, you can be removed from the program.

Important notes:

- The withdrawal time after the last dosage of SLICE is 60 days.
- Since this is a drug milled into feed or top-coated onto feed, fish must be trained onto feed for it to be ingested at an effective dose level.
- SLICE doesn’t usually reach full efficacy until 20-30 days after treatment depending on water temperatures (some gill lice remain attached for several weeks after treatment, but they are dead and will eventually drop off).
- Although SLICE is very effective at eliminating gill lice, a small percentage of gill lice may not be killed by the drug.

Step 1 was started in October and we expect to hear back from the FWS in January. Greg has talked to the CDPHE-WQCD about obtaining the letter for Step 2. Once these two steps are complete, we should be able to move ahead at a faster pace and get the program set up to begin use this spring when ice comes off the ponds. We are excited to participate in this INAD program and hope to achieve excellent results by keeping our fish healthy so we can achieve our management goals in the future.