

April 26, 2011

TO: ALL FISH FRIENDS VOLUNTEERS & TEACHERS

Hi everyone:

It's time for an update from the Atlantic Salmon Federation regarding the 'Fish Friends Program'. As you probably all know by now we were very busy in March delivering salmon eggs to approximately 100 participating schools throughout New Brunswick. I'd like to take this opportunity to once again thank the Environmental Trust Fund for their annual support of the Fish Friends Chiller Unit Replacement Program and to hatchery staff in Mactaquac, Charlo and Miramichi for providing us with healthy salmon eggs once again this year. Thanks should also be extended to all of the volunteers and affiliated organizations who have helped with equipment setup, egg deliveries and ongoing support.

At this time all participating schools should have received eggs and the eggs should have started to hatch. If you have any other questions regarding your incubation system, or the Fish Friends Program in general, you should direct them to your area volunteer or to Geoff Giffin, NB Program Director for ASF (ggiffin@asf.ca).

FISH FOOD AND FEEDING INSTRUCTIONS

Some of you have already contacted me inquiring about fish food and feeding instructions. All of you should have received your fish food in clear plastic zip-lock baggies. If you have not received your food packet, please contact me immediately. The food we are sending you is a moist starter food specially formulated for young salmon fry. **Do not start feeding your fish anything else until you receive the proper food from us.** There is a special knack to getting your fry to initiate feeding so I have included 'very specific' feeding instructions below. **It is critically important that you follow these feeding instructions carefully.**

Important: this food must be kept refrigerated at about 5 degrees Celsius. Most schools have a kitchen refrigerator in the staff room so your food can be stored there. If the food is not kept refrigerated it will spoil and harm your fish. I strongly encourage you to place this food in a plastic container marked "Fish Food" before placing it in a refrigerator because it makes a poor substitute for Coffee!

As I mentioned above there's a real knack to getting your fish to initiate feeding and if you don't carefully follow the feeding instructions enclosed your fish might not start feeding at all and could eventually die. It's important to note that when your eggs hatch they have a yolk sac which they live off until feeding begins. You don't need to begin feeding until this yolk sac is almost all gone. That means while you will all receive your food next week it doesn't mean that you will have to start feeding right away because some of your eggs hatched sooner than those in other schools. Again, refer to the feeding instruction enclosed and if you have any questions or problems please give me a call.

Aquarium Maintenance

Now would be a good time to do another visual check of your incubation system to make sure it's nice and clean and working properly. Check your foam and charcoal filters, and if they look really dirty you may want to remove them and rinse them under tap water for 'a few seconds' and then put them back in place. Remember the ammonium filter doesn't need to be added until you are about to start feeding. For any of you who have already added the ammonium filter all you have to do is re-activate it just before you start feeding your fish. To do this, remove the filter and rinse it under a tap for a few seconds as you roll it between your hands, then return it to your pump. The rest of you should add the ammonium filter a couple days before you begin feeding. Again,

before you add the ammonium filter rinse it under a tap for a few seconds to remove the fine particles before placing it in the pump and place it on top of the foam and charcoal filters. If you don't have an ammonium filter (aqua-clear 70), I suggest you purchase one and have it on hand before you begin feeding.

This would also be a good time to check to make sure that you have a screen over the water intake pipe on your pump to prevent young fry from being sucked up into it and getting killed. Every year we have a couple schools that lose some fish because of this, which is unfortunate because this is totally avoidable. If you don't have a screen over the intake I suggest you get a piece of fly screen and place over the end of the intake pipe and secure it in place with an elastic band. If you already have a screen in place check to see if it is dirty. If it is it might be restricting water flow through your pump. If the screen is dirty remove it and rinse it under a tap and replace it again. Now that your eggs are hatching and you have live fish in your tank they will need more oxygen so you can speed up the flow of water by sliding the lever from the -ve side to the +ve side.

Check your tank regularly and if you find any dead eggs (which are white in colour), or dead fish, remove them immediately using a pipette or turkey baster and discard them in the garbage. If dead eggs and dead fish are left in your tank you will begin to see a white fuzzy fungus start to grow on them and this fungus is harmful to live eggs and fry, so make sure you remove any dead eggs or fry as soon as you see any. You should also use your pipette or turkey baster to remove any dirt that builds up on the bottom of your tank. Do this at least once a week.

Fish Friends Manual – Again, I encourage all teachers to use the activities in the Fish Friends Manual to supplement your regular curriculum as often as you can. If you don't have a copy of the manual you can download one from ASF's web site (www.asf.ca) under the section "Fish Friends". Remember, the true value of the Fish Friends Program is in the messages found in these lesson plans. So, I strongly encourage you to use this manual regularly in order to reap the full benefits from this program.

That's's about it for now. Drop me an e-mail to let me know how things are going. I encourage you to visit our Fish Friends Web-site at: www.asf.ca and follow the links to the Fish Friends site from there, to access related information. If you have any questions about anything else please don't hesitate to contact me any time. That's it for now, so thanks everyone and stay tuned!

(see feeding instructions below)

Yours in Conservation



Geoff Giffin

FEEDING INSTRUCTIONS

When your eggs hatch take a good look at the size of the yolk sac attached to each of the alevin. These alevin will live of this yolk sac for about three weeks. You do not need to start feeding until this yolk sac is almost all gone. When the yolk sac is almost all gone and a few days before you start feeding you need to insert the ammonium filter in your water pump. Simply rinse the ammonium filter for about 15 seconds under a water tap while gently rolling it between your hands to remove the fine particles. Then place the ammonium filter in the water pump. Normally the ammonium filter is placed on top of the charcoal and foam filters but the order is not all that important. If you already have your ammonium filter in place just give it a quick rinse under a water tap to reactivate it a couple days before you are ready to begin feeding. **Important note: It is critically important to have your ammonium filter in place before you start feeding because this filter neutralizes by-products from the breakdown of food that collects on the bottom of your tank, and it neutralizes the waste from your fish.** If you don't have your ammonium aqua-clear 300 filter yet, get it as soon as you can. Now might be a good time to give your foam and charcoal filters a little rinse under the water tap as well. It is not necessary to rinse your foam and charcoal filters frequently. Rinsing them too much will do more harm than good. I suggest rinsing them now and again about the middle of May.

INCREASING WATER TEMPERATURE – Initially when you set up your incubation unit you were asked to set the water temperature to 5 degrees Celsius and it should still be at or near that temperature. If your eggs have now hatched you should slowly (over a period of a couple days) begin to increase the temperature of your water by a couple of degrees per day until the temperature reaches about 8 degrees. This will speed up the hatching process and will speed up the absorption of the yolk sacs on the alevin. It's important to do this.

NOW THE MOST CRITICAL STEP – When the yolk-sac is almost all gone it's time for the first feeding. To help initiate the feeding process there's an important trick we must follow. **When the yolk-sac is almost gone you should turn your water temperature from 8 degrees directly up to 12 degrees and begin feeding immediately.** This sudden increase in temperature to 12 degrees is the cue that initiates the feeding process. If you are in doubt about the amount of yolk-sac remaining, it's better to bump your temperature to 12 degrees and start feeding a little early rather than too late.

How to place food in tank - For the first few days of feeding you should place the food on the water near the water pump so that the force of water actually takes the food down to the fish. For the first week or so after you start feeding you probably won't notice much activity, because the fish only gradually begin to recognize the food. After you've been feeding this way for a week or so you can place the food lightly on the surface away from the water pump so that it floats on the surface. This will force the fry to come to the surface to get it and it will also mean that less waste food ends up on the bottom of your tank. Continue feeding on the surface until it's time to release your fry in June. These young fish are really shy at first so you should not disturb them after you add food. After a couple of weeks they become less shy and you can observe them feeding more aggressively.

HOW MUCH TO FEED- the fish should be fed a tiny pinch of food once a day. A pinch being a small amount between your thumb and pointer finger. You will see when you receive your fish food that you only have a small amount which has to last you from now to June so judge yourself accordingly when feeding. **Whatever else you do please don't over feed or you will pollute the tank and kill your fish.** Better to under feed than over feed. It is not necessary to feed on the weekends. Fish don't need three square meals a day like humans, they are used to only eating when food is available and they can go days without food if they have to. Also, you should feed at the same time each day, preferably early in the morning about 9:00am. By doing this you can also check your tank and if something is wrong you have the rest of the day to deal with it. If you have any questions about feeding please contact me right away.

DEAD EGGS AND FISH – If you observe dead eggs or dead fish in your tank at any time it's very important that you remove them immediately. Use a turkey baster or long pipette with a bulb on the end to do this. The dead eggs and dead fish should be discarded by simply placing them in the garbage. It's not uncommon for everyone to get a few dead eggs and a few dead fish from the time you start, but if you get more than three or four dead eggs or dead fish per day you should contact me immediately for instructions on how to deal with the problem. Dead eggs normally turn from their pinkish colour to a white colour when they die. If dead eggs and dead fish are left in your tank you will begin to see a fuzzy white fungus growing on them which is harmful to live eggs and fish, so remove dead eggs and fish as soon as you see any.