



Checklist: Fish Transferring


Steps to properly transfer your fish:


No	Before starting	<input checked="" type="checkbox"/>
1	<ul style="list-style-type: none">Measure oxygen in the fish's current production system. This should be above 4 mg/L to ensure that the fish are ready for transferring.	
2	<ul style="list-style-type: none">Stop feeding your fish 24 hours before moving to reduce oxygen consumption during the transfer.	
3	<ul style="list-style-type: none">Try to move your fish in the morning to avoid high temperatures in the afternoon, thereby minimizing stress.	

No	Crowding the fish	<input checked="" type="checkbox"/>
4	<ul style="list-style-type: none">Crowding is done for easier capture of the fish, but also to minimize the stress for fish that don't need to be transferred.	
5	<ul style="list-style-type: none">Only crowd the part of the fish population that you want to transfer.	
6	<ul style="list-style-type: none">Do not crowd fish that you don't want to transfer because you should not leave crowded/handled fish in the culture population.	
7	<ul style="list-style-type: none">Only crowd as many fish as you can immediately transfer.	
8	<ul style="list-style-type: none">Use proper tools for crowding. For instance, crowd fish gently by using sticks under happas, placing nets, or using grading devices.	

No	Collecting fish	
9	<ul style="list-style-type: none"> Collecting and moving the crowded fish into the transport unit (bag, tank, or others). 	
10	<ul style="list-style-type: none"> Catch fish with non-invasive equipment to avoid damaging the skin of the fish. For example, do not use scoop nets (except for dead fish or final harvest) but instead use smooth buckets with drainage holes to collect fish safely. 	

No	Counting/weighing/grading the fish	
11	<ul style="list-style-type: none"> A fish transfer moment is an ideal moment to count your population, get an estimate of your biomass, and apply grading if needed. 	
12	<ul style="list-style-type: none"> Sampling fish one-by-one can cause unrequired additional stress. An alternative method can be performed by using a bucket which you fill with fish to a marked line. Once every few buckets, you weigh the fish in the bucket individually to get an estimate of the average weight and number of fish per bucket, and you multiply this by the amount of buckets moved. 	

No	Moving the fish	
13	<ul style="list-style-type: none"> The number of fish should be adjusted based on the travel distance and oxygen supply in the transport system (in bags, cages or tanks). In general, the longer the transport, the less fish. 	
14	<ul style="list-style-type: none"> Ensure enough oxygen supply in the transport system. In the case of bags, you can fill the bags with 50/50 water and air (or pure oxygen; recommended when long transport is needed). In the case of tanks, provide aeration with air or oxygen. When pure oxygen is supplied, more fish can be transported per m3 water. 	
15	<ul style="list-style-type: none"> Measure oxygen levels in the water throughout transport with an oxygen probe. Try to maintain oxygen levels above 4 mg/L. 	
16	<ul style="list-style-type: none"> Minimize handling during the moving of the fish (e.g. avoid shaking or water turbulence if moved in bags/ cages/ tanks). 	

No	Acclimatizing and releasing the fish	
17	<ul style="list-style-type: none"> Before acclimatizing and releasing the fish in the 'new' waters, measure the oxygen levels to make sure they are above 4mg/L. 	
18	<p>Acclimatize the fish in their new system:</p> <ul style="list-style-type: none"> In case of bags, place the sealed transport bags on the surface of the receiving water (pond, tank, etc.). After 20-30 minutes, slowly exchange water from the bags with water from the new system. Do this for 15-20 minutes, this helps the fish adapt to differences in pH, salinity, or hardness. Then, slowly release the fish in the new water. In the case of tanks, exchange half of the water in the tanks with water from the receiving units. Wait 15 minutes before releasing the fish in their new tank. When using pipes to release fish into their new tanks. Make sure the surfaces are smooth and no rough surfaces are present which can damage the fish. 	
19	<ul style="list-style-type: none"> Contrary to popular believe, fish do not need to be starved AFTER transfer. Starving before transport is done to minimize oxygen consumption during transport. However, after transport fish need to get the opportunity to recover and feed plays an import role during this recovery. Appetite may be lower in the first moments after transfer, but feeding should still be applied according to the response of the fish. 	