

Fish stress

Maintaining happy fish means an aquaponics system is in balance. Stress will kill fish or reduce their life span and also cause disease.

Poor water quality

Poor water condition is often due to lack of good filtration. Filtration that can handle the volume of fish waste and uneaten food in the fish tank is essential.

More is always better than less when it comes to filtration and the volume of water pumped through the filtration. Inadequate filtration meant that there is an inadequate volume of bacteria to convert the waste and uneaten food. This leads to an increase in ammonia or nitrite, this can be seen at extreme levels as murky or cloudy water. At this point water changes become necessary if the levels of water impurities rise too high. Stop feeding the fish and do partial water change.

Bad smells mean there are problems in the tank, and fast action is required otherwise fish will die. Remove uneaten food from the bottom of the tank as it will start to decompose and result in a build-up of ammonia in the system.

Transportation

Fish do not enjoy travelling. Transporting large numbers of fish can have a drastic effect on their slime coat, leading to weakening their immune system.

Handling Fish

Fish do not like to be handled or moved by force. Leaving them undisturbed is better for their health. When catching them for eating or moving, ensure to use the proper weave of net to prevent the fish from being snared.

Salt baths alleviate stress

Salt baths can be used as a tonic to treat parasites that may be lurking on fish.

Salt is also used to de-stress fish. Fish actually contain levels of sodium in their systems. When fish are stressed they react by excreting minerals into the water. If this continues, then the salt loss can prove fatal. The treatment is to add a little salt to fish tank water. The concentration of salt in the water is related to the continued excretion of minerals by the fish, so increasing the water salinity reduces salt excretion and stress for the fish. Recommended salinity levels are in the range of 0.5-3 ppt.

However, be aware that adding salt into a system can affect other parts of the system. Some plants, such as strawberries, will not tolerate salt levels beyond 3 ppt. Do not dose higher than recommended as this will also kill both the fish and plants.

Low oxygen levels

Low oxygen levels in the water can cause chronic stress and eventual fish fatalities because the fish are trying to breathe faster than normal to get more oxygen. Different fish require different amounts of dissolved oxygen in the water. Trout requirements are 6ppm of dissolved oxygen. Other 'hardier' fish require less. Adequate aeration of the fish water is essential at