

Basic Goldfish Care

There is an adage in goldfish and koi keeping that says that the key to healthy fish can be found in water quality. It is repeated so often that people take this saying for granted, or perhaps lose sight of what it really means. There are several important elements to water quality, including: maintaining consistent water parameters; maintaining adequate stocking levels; and installing effective filtration systems. This article will examine water quality practices from the point of view of goldfish keeping, and will hopefully lead to improved fish health and appearance.

Every fish keeper should look toward maintaining consistent water quality parameters, which include stable Ph levels, proper ammonia and nitrite readings, and minimal organic load in the pond/aquarium. It is far easier to maintain stable levels in a pond environment than it is an aquarium; simply stated, the larger the volume of water, the more difficult it is to cause rapid changes to one of these measures. It follows that it is easier to experience changes in Ph, ammonia, etc. in a smaller volume of water. It is not uncommon for people to bring their fish from a pond environment to an aquarium in the fall/winters season, and to experience a number of problems with their fish. People often search for reasons for altered fish behavior under these circumstances; in many cases, it can be attributed to unstable water chemistry in the new environment.

There is clearly a correlation between fish load, consistent water quality readings, and filtration. Often, in an outdoor environment, there is a much better balance between fish load and filtration than in an indoor environment. A pond can support a larger fish population than an aquarium, so careful planning is required when considering how to over-winter fish in aquariums. There is no hard and fast rule for fish load in an aquarium, since you must balance aquarium water volume, filtration available, and fish size. There are, however, some common sense rules to apply which will result in a healthier environment for our fish.

The first thing to keep in mind is that the rules for fish length/ water volume were originally designed for tropical fish keeping. Fish length measurements between tropical fish and goldfish just won't work. Most goldfish have several times the mass of similar-sized tropical fish. Water volume and filtration requirements won't work for goldfish due to their increased mass when compared to tropical fish.

When designing a filtration system for goldfish, keep in mind their increased metabolic requirements. This means that you will likely have to over-spec both biological and mechanical filtration for a goldfish aquarium. Similarly, when determining water volume requirements, err on the high side with goldfish; in other words, always plan to provide a larger volume of water than you originally estimated. Most successful goldfish breeders and show participants have stocking levels of 3 – 4 fish (3 inches and over) in a 55 gallon aquarium. While this might seem too restrictive, consider that you should not be aiming at having your fish survive, but thrive.

Perhaps the single most important element to good goldfish husbandry is that of frequent water changes. By frequent, I mean at least once per week, preferably two or three times per week. Many people who hear this react negatively, thinking that too much work is required to do this. Well, if frequent water changes are a necessity, and would normally involve too much work take some time to design a system that requires less work. Automated discharge/fill systems are the ideal answer, but

might not be practical for everyone. An alternative is to design a system that utilizes separate siphon systems for each tank, and has a semi-automated (read water hose) system to allow easy filling of tanks. If you have to resort to the bucket and siphon system to fill individual tanks, then frequent water changes will become a hassle.

Years ago, the adage in performing water changes was to have “aged” water – that is, a supply of water that had been treated and set aside to rest for a period of several days to a week. The thinking was that this “aged” water would be more similar to the tank water, without the organics present. While this makes perfectly good sense, most people can’t afford the luxury of maintaining “aged” water. Today, with various water treatment methods to remove chlorine/chloramines, the need for aged water has been reduced. Still, if you have the room and time to add “aged” water, it is probably the best way to ensure that water conditions are stable.

AS a final note, I’d measure water quality levels for the first few weeks after bring fish indoors from the pond. Actually, I’d suggest that you keep measurements of water quality on a weekly basis, so that you can visually see changes in water chemistry. When something has trended in a certain way for an extended time period, and then changes rapidly, it’s an indication that something isn’t working correctly, and calls for intervention.

If you design a system that provides adequate filtration, minimal stocking levels, and consistent water quality measures, your fish will be healthier and look better. As a bonus, you won’t have to worry as much about maintaining your fish, and can enjoy them more.