

Quick Growth or Long Life – A Balancing Act

As the title implies, you can usually choose one or the other when raising goldfish, but it is rare for the two – quick growth and long life, to go together.

Let me start by defining what I mean. By quick growth, I mean achieving body sizes approaching that of adult-size within a one year period. Many people are skeptical that such growth rates are possible, yet they are achievable under certain conditions, which I will describe below.

Rapid growth rates can be achieved by a combination of the following factors: heavy, almost continuous feeding; regular, at least daily water changes; heavy filtration; adequate space for growth. Let's look at each of these conditions in turn. Goldfish do better when fed in small quantities, but almost every hour or every other hour. Feeding a combination of live foods and high protein foods will yield high growth rates, provided the other conditions are met. Regular water changes are required when feeding fish for high growth rates. By regular, I mean at least daily, and preferably using a run-off method of water changes where the water is constantly being replenished. A third requirement is that heavy filtration take place: both mechanical and biological. The mechanical filtration is required to remove suspended particles, which will occur due to the heavy feeding schedule. Biological filtration is required to remove ammonia and nitrites which will build-up in the water due to the higher metabolism that the fish will exhibit. Finally, adequate space is required to ensure that maximum growth rates are achieved. If a constant-change water regimen is adopted, this requirement is lessened somewhat.

This type of rapid growth method is employed by some fish farms, and is highly successful in developing near-adult size fish in a short period of time. There is nothing inherently wrong with this method when employed by knowledgeable fish farmers.

If this method works, why the title; why can't we have rapid growth and long life? Well, fish farming and raising goldfish as a hobby or to show are two different things. Most hobbyists do not have the ability or the means to maintain this type of feeding program. As a follow-up to this, most hobbyists do not have sufficient filtration to maintain excellent water quality in the face of heavy feeding.

As a result of the lack of adequate facilities, filtration and water quality, fish that are raised in intensive fish farming application, and then introduced into home aquaria are faced with a change in living conditions that adversely affect their health. It is very common for a person to purchase one of these fish, only to have it die shortly thereafter. In many cases, the person is then angry at the dealer or breeder, without understanding the environmental factors at the farm, and then in their own set-ups that may have resulted in loss of fish life.

If you purchase a fish that was raised intensively, it is helpful to do the following in setting-up your aquaria:

- Provide as much filtration, both mechanical and biological, as is possible
- Perform frequent water changes (with a minimum of once a week)
- Limit fish stocking in the aquarium drastically, and preferably introduce the fish to an outside pond
- Cut back on feeding; do not continue the feeding methods employed on the farm

In many cases, it is easier to buy smaller fish, and then raise them to adult size gradually. While this is good advice, many people can't resist buying large fish to show "now." There are very good reasons for buying fish to show "now," but a number of fish bought to show "now" will die soon after the show. The reasons for the die-off are varied, but my guess is that the primary reasons are related to water quality, over-feeding and filtration that the fish received on the farm, and at the hobbyists' house.

I have personally tried an intensive method of fish raising, and a slower method that took perhaps two to three times as long for fish to reach fully mature sizes. Of the two methods, the slower one produced healthier, longer-living fish and maintenance and care were far easier in this slower method.

Which method is right for you? It depends on your end goals, and what you want to achieve. Awards can be won by fish that have been grown slowly, and take time to mature. The waiting period is much longer, but the satisfaction may be greater, since you helped the fish develop its potential, rather than buying a finished fish now.