

## **Fish to plant ratio's**

Many people ask at what ratio can one plant plants in relation to fish. There are many university studies done on this very thing and for those wanting to operate their system at a maximum level of production may want to look into this information. Most, if not all, of it though is geared toward the commercial producer to maximize their return on investment (ROI) in the shortest time possible. With this system this may not be the primary concern. The **My AquaFarm™ Aquaponics System** is designed to be a very forgiving system for those who want the benefits of an aquaponics system that has a good deal of latitude in design to hedge the operator in favor of growing fish successfully to maturity and get several vegetable harvest's along the way. I would much rather you grow 25lbs of fish to maturity and harvest them than try to grow 50lbs of fish only to get close to harvest time and lose all the fish if there was a problem while away from the system if at work during the day. This is why the fish tank is oversized for the growbed. Honestly it takes only 10 or 12 tilapia hand sized to keep things growing very nicely in this system. Can it handle more than that? Of course. What will limit the amount of fish the system can handle is the species selection, water quality (temp, pH, nitrate/nitrite levels, DO, etc.) cycle time, feeding rate. If using tilapia, a ratio of 1lb of tilapia per 5 gallons of water at finished weight will safely get you growing. Some species are especially suited for aquaculture of which tilapia is a popular choice because of it's tolerance to low DO (Dissolved Oxygen) and ability to be crowded. Any fish designed for your location and that can accept feed is a good choice. Some may even want to use ornamental fish (goldfish, koi, etc) as pets since the idea of consuming fish you have fed for a long time does not appeal to you. This is just fine. Any fish will work to produce the needed ammonia and nutrients from the fish waste.

As far as plant density goes, you can plant as close as the species will allow and maintain good airflow between the plants. Poor airflow is one of the primary issues causing plant stress and disease. Stresses and diseased plants are major targets for pest infestations as well. I know all this may not seem very scientific but the honest truth is, it doesn't have to be. After being around these systems for years, the maintenance and upkeep becomes intuitive. It is after all, a living machine. Most problems occur from operator error of some sort such as overcrowding the plants and overfeeding the fish, both of which can spell disaster. The key here is patience and persistence. **You can succeed at this.**