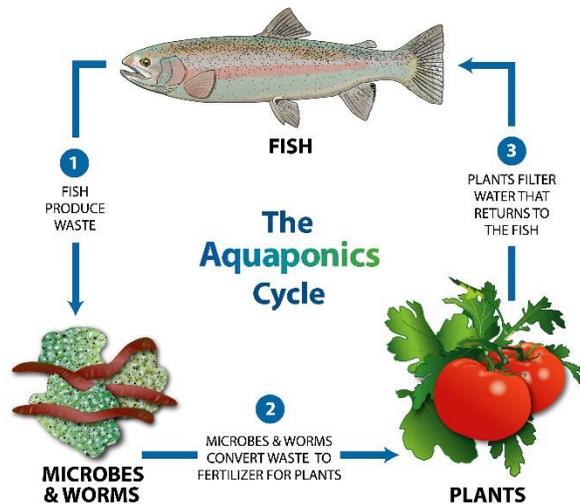


# Aquaponics: The Art of Raising Fish and Vegetables Together

## What is Aquaponics and How Does it Work?

**Aquaponics** is “the marriage of aquaculture (raising fish) and hydroponics (the soil-less growing of plants) that grows fish and plants together in one integrated system” (The Aquaponic Source). It is one integrated system that works together to provide both the plants and fish exactly what they need to survive. Fish need clean, filtered water to live and plants need nutrients to grow and produce.

The concept is simple. The fish serve to provide waste which is an organic food source for the growing plants. Microbes (nitrifying bacteria) and composting red worms, which thrive in the growing media, then do the job of converting the ammonia from the fish waste first into nitrites, then into nitrates and the solids into vermicompost that can be used as food for the plants. Finally, the plants act as a natural filter sending clean water back to the fish. This is a phenomenon that has occurred naturally in Mother Nature from the very start and finally, modern farmers are using it to their advantage!



## Why Have an Aquaponic System?

There are numerous reasons why people are choosing to install an aquaponics system! Here are just a few...

- Waist-high aquaponics gardening eliminates weeds, back strain and animal access to your garden.
- Aquaponics uses only 1/10th of the water of soil-based gardening, and even less water than hydroponics or recirculating aquaculture.
- No chemical fertilization required, making it an organic process.
- Gardening chores are cut down dramatically or eliminated. The aquaponics grower only does the enjoyable tasks of feeding the fish and tending to harvesting of the plants.
- Great educational tool for children.
- Can be easily set up indoors making year round gardening simple and fun!

One of the main reasons people are starting aquaponics systems though, is to ensure their own food security. With rising economic and environmental issues around the world, knowing you have your own supply of food is critical should an

emergency happen. The rise of food borne illnesses and toxins found in fresh produce and seafood are also a major concern for many.

## How Big Does an Aquaponic System Have to Be?

---

Your aquaponics system can be as big or as small as you want! While most people make it big enough to raise edible fish, you do not have to. Some people will simply raise ornamental fish and use it to supply fresh produce throughout the year. If you do want to raise edible fish though, the minimum size of the fish tank should be 50 gallons. Most people will re-use or recycle materials that can be found around the home or from local famers. 55 gallon drums, IBC totes, and aquariums are extremely popular in the hobby and can be used in a number of different ways. The main concern when choosing your fish tank and grow bed, is the material it is made of and if anything has been held in it previously. You must insure that it is a food grade material and that it was not used to hold toxic substances. Here are a few examples of different systems people have created!



## More Questions?

---

Feel Free to contact us and we will be more than happy to answer any and all questions you have! We also have a variety of different systems set up around our retail location, so you could stop in and we can give you the grand tour. If you're interested in starting up an aquaponics system, we do carry a few different styles that are already plumbed and ready to take home, or we can help you step-by-step in designing a system of your very own!



Aquatic Designs & Supplies, Inc.

445 N. Chestnut

Monrovia, IN 46157

317-996-3106

[Info@AquaticDesign.net](mailto:Info@AquaticDesign.net)

[www.AquaticDesign.net](http://www.AquaticDesign.net)