

Types and styles of aquaponics systems

There are three types of systems that are used in contemporary aquaponics ..

1. Gravel bed systems
2. Floating raft
3. NFT (Nutrient Film Technique)

All three systems have one common element, the fish tank. The difference is in the place where the vegetables grow.

The gravel bed system



Figure 3: Gravel bed System

In this system the vegetables grow in a bed of gravel, clay pebbles, rice husks, etc. The media acts as a place the vegetables can grow in and have support.

Sludge and waste from the fish tank gets pumped into the grow bed with the media. In the grow media the bacteria processes the waste, thereby acting as a biofilter and eliminating the need to remove the solids in a separate system.

These systems are known as "Flood and Drain" (also known as Ebb and Flow), and as the name suggests the water slowly fills up the grow bed and then a syphon drains it out to the fish tank or sump.

Some small systems do not need a syphon and the water can just flow out to the fish tank.