

The important things to remember in selecting the media are:

- Is it easy to handle?
- Is it easy to clean?
- Does it have enough surface area for the bacteria to develop on?
- Does it allow for easy drainage?
- Is it expensive?
- Will it affect the pH?
- Will it introduce elements to the water that will affect the fish and or plants?
- Will it block the system?

The gravel bed does three major jobs:

1. It acts as a solids separation filter by removing solids particles from the water via mechanical screening
2. It acts as a solids mineralization area whereby solids are broken down into nutrients
3. It acts as the bio filter whereby dissolved ammonia is converted to nitrite then to nitrate

The floating raft system



(CERES Aquaponics System) <http://www.Jlickr.com/photos/ceresgreentech/sets/72157625982336819/show/>

In this system the vegetables float on a styrofoam raft. The rafts have small holes cut in them where plants are placed into net pots. The roots hang free in the water and allow the uptake of nutrients to occur.

The water level beneath the rafts is anywhere from 25 to 50 cm deep and as a result the volume of water is approximately four times greater than other systems. This higher volume of water results in lower nutrient concentrations and so higher feeding rate ratios are used. Bacteria form on the bottom surface of the rafts but generally, a separate biofilter is needed.