## **Growing Edible Fish and Vegetables at Home**

Aquaponics is a soil-less recirculating system combining hydroponics - the growing of food plants in water, and aquaculture - growing edible fish in ponds or tanks. The plants take up waste from the fish as nutrient. This cleans the water so the fish can survive and thrive.



# fit into a home garden or even a balcony. Is Aquaponics Time Consuming?

organic chemical-free way of growing food.

All systems in which you grow fish and crustaceans need to be checked daily for feeding and general health. Automatic fish feeders are available. After setting the system up, the main work is regular harvesting of your fresh organic produce.

### Aquaponics Courses

Introduction courses are available. Refer to our web site for details.



















## What will you need?

- Herb or vegetable seeds, or seedlings with roots washed of potting mix
- Cultilene rockwool cubes for starting your own seeds
- Fish tank or pond needs to be food grade plastics, minimum size 500 litres – beware of chemical residues
- Grow bed or tray volume for media around half that of fish tank, minimum 250 litres
- German quality Liaflor expanded clay grow bed media

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CYCLE

- Submersible pond pump
- Air pump and air stones
  - Plumbing kit –pipe and fittings
  - Fish fingerlings or juvenile crustaceans
  - 5 in 1 Freshwater Testing Kit
- A pond thermometer
- · Pond Bacteria 22.5g sachet
- Complete Water Treatment 90g



### **Growing tips**

**Expanded Clay:** German quality Liaflor Expanded Clay is a naturally occurring clay mined, mixed with wood, pelletised and fired in a rotary kiln at 1200°C. The secret to its filtration qualities is its incredible internal surface area, whereby the bacteria for the nitrogen cycle can flourish exponentially. Liaflor is germ-free, pH neutral and chemical and biologically neutral. Liaflor is Eco-friendly, non-polluting of the environment and can be reused for 20 years!

Water temperatures: This has a significant influence on the types of fish or crustaceans grown. Cold water (below 20°C) suits trout and marron. Warm water (above 20°C) is essential for barramundi and desirable for silver perch, Murray cod, jade perch, yabby and black bream. In Perth its possible to grow trout in winter then harvest and replace

with barramundi for the summer months.

All year round edibles include silver perch, jade perch, black bream, marron and yabby.

Ornamental fish such as goldfish and Koi can also be grown and enjoyed all year round.

Water quality and testing: Start ideally with rainwater or reverse osmosis filtered water. If using scheme water leave for at least 24 hours for chlorine to dissipate. Once running it's recommended that you test daily for

ammonia, nitrate and nitrate as well as pH. Test once a week only after the system has settled down.

**Deficiencies:** Plants with yellow leaves. Usually this means that you have insufficient manure in the system, add more fish. High nitrate test results mean that more plants are needed.

Fish food: Aim for commercial grade floating fish food that does not contain any land based animal by-products. Available from 1-11mm size in 500g, 5kg and 20kg bag sizes.

Starting plants: Vegetable and herb plants can be started from seed planted into Cultilene rockwool cubes. Once germinated these cubes can be placed directly into the expanded clay media in the grow bed. If introducing packaged seedlings to your system you need to wash potting mix off the roots.

