Aquaponics

What is aquaponics?

- Combination of AQUACULTURE (raising fish) and HYDROPONICS (soil-less growing of plants).
- Growing fish and plants together in one integrated system.
- The fish waste provides an organic food source for the plants
- The plants naturally filter the water for the fish

There are also microbes (nitrifying bacteria) introduced into the system, which convert ammonia from the fish waste into nitrates for the plants.

The nitrates provide the nitrogen that plants can use to make proteins in order to grow.

- Solid fish waste is also turned into vermicompost (vegetable compost) that acts as plant food. (Vermicompost is what is produced by worms and appears in the worm casts seen on the surface of soil.)

Aquaponics therefore can capitalise on the benefits of the hydroponic and aquaculture systems and avoid the drawbacks of each

- Pesticides and artificial nutrient usage
- Weeds, pests and soil-borne insects
- Physical demands of heavy digging and bending
- Location – crop farms can often be located thousands of miles from where the food is consumed.

There are many other benefits of aquaponics over aquaculture and hydroponic systems, including the economical use of space, particularly with plants that need little support whilst growing, such as strawberries and leafy greens.

The initial cultivation of a small number of seedlings has given an initial spark of hope of good things to come.

Obviously, these things are seasonal, but the general plan is to start sowing seeds in the next few weeks for an early spring crop. Some of the resultant seedlings will be transferred into the aquaponics system for comparative growing trials. The rate and success of cultivation in the aquaponics system will be compared to the more traditional growing methods: i.e. in the polytunnel, greenhouse and external cultivation beds.

Future updates to come!