Allotment Aquaponics

A modern system for allotment gardens that creates the possibility for every million programme building to get its own allotment garden.

The Ålidhem allotment gardens will be a system consisting of several aquaponic hubs and an education hub.

Conceptualize

Creation of the concept and the programme.
The Design of each unit is based on zipgrow towers and a media bed that utilize the aquaponic system flood and drain.

**Design of One Unit**

- **Harvesting**
  - Leafy greens every 5 weeks
  - Herbs every 3 weeks

- **Number of ZipGrow towers to be able to harvest every week**
  - Leafy greens: 5 towers
  - Herbs: 3 towers

- **One Unit**
  - 8 + 8 towers
  - 1 shared media bed

- **Media Bed**
  - 2m*0.6m*0.3m media bed
  - 30%-60% volume of media bed is water
  - 70% of volume = 262 liters to have a small buffer

- **Fish tank**
  - 67.5 liters of water
  - 972 liters of water
  - 1 ZipGrow tower
  - 0.9 kg fish
  - 0.9 kg fish

- **Fish Food Factory**
  - 14 kg fish
  - 30%-60% volume of media bed is water

- **Media Bed**
  - 16 ZipGrow tower
  - 14.4 kg fish
  - 972 liter of water

**Programme + Site**

- **Aquarium**
  - The fish food is made of soldier fly larvae. The larvae feed on the compost. When the larvae reach the last stage, they crawl out of the compost container by themselves. Then, you can put them into a machine where they can be shaped into pellets. This way, they are more easily digested by the fish. The decomposing made by the larvae produces a nutrient-rich leachate, which can be used as a supplement for foliar application.

- **Garden**
  - Mainly for growing leafy greens and herbs. By having a vermicompost where the fish food factory is located, you can get the opportunity of adding red worms to your zipgrow towers. This will increase filtration and help break down solids, making nutrients more bioavailable in the aquaponic system.

- **Circulation**
  - All fish tanks are placed in a room underground to avoid the sunlight. This is because you want to avoid production of algae.

- **Garbage Facility**
  - You throw away your food waste here into a big square pipe. The food waste then falls into the compost in the fish food factory.
ARRIVING TO ALLOTMENT AQUAPONICS

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