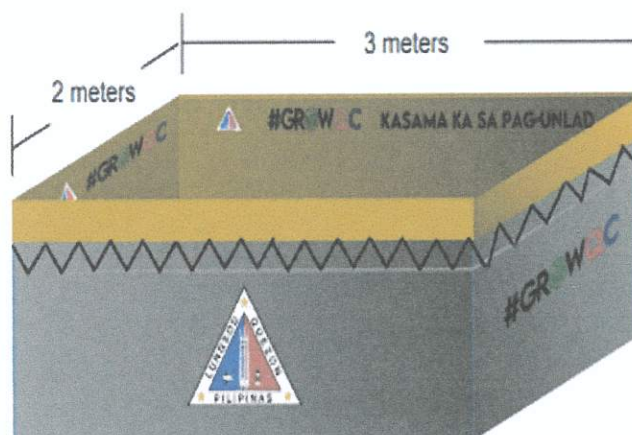


## DESCRIPTION OF EACH UNIT:

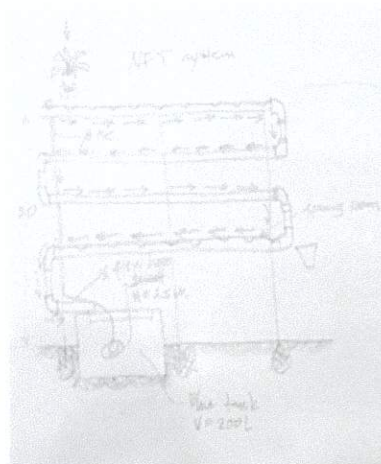
### Aquaculture small: 2x2 canvas

This unit can grow up to 600 fingerlings like catfish and tilapia in an intensive way with the use of water submersible pump for the circulation of the water to have more oxygen, and filters to manage the filtration of the ammonia and solid particles and produce more good bacteria to lessen the toxicity of the water.



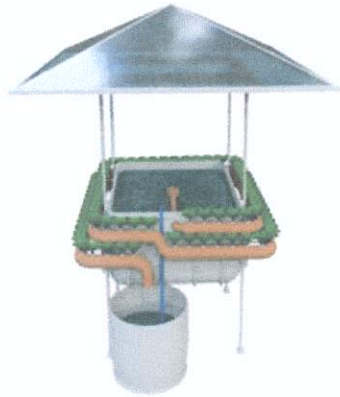
### Aquaponics small: NFT Basic model (A-Type)

It is used in growing fish and plants in sustainable way. The plants planted in the PVC pipes are fed by the waste of the fish from the fish tank. And the plants clean the water that goes back to the fish through gravity. Along with the fish and their waste, microbes play an important role to the nutrition of the plants. These beneficial bacteria gather in the spaces between the roots of the plant and converts the fish waste and the solids into substances the plants can use to grow.



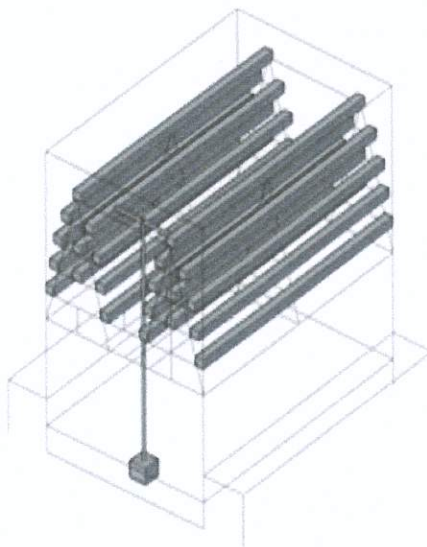
### **Aquaponics small: IBC Tank model (Airlift pump)**

It is used in growing fish and plants in used IBC Tank as fish tank. The plants planted in the PVC pipes around the tank are fed by the waste of the fish. And the plants clean the water that goes back to the sump tank through gravity and then the pump pull the water up to the fish tank. Along with the fish and their waste, microbes play an important role to the nutrition of the plants. These beneficial bacteria gather in the spaces between the roots of the plant and converts the fish waste and the solids into substances the plants can use to grow.



### **Aquaponics small: 2x3 canvas**

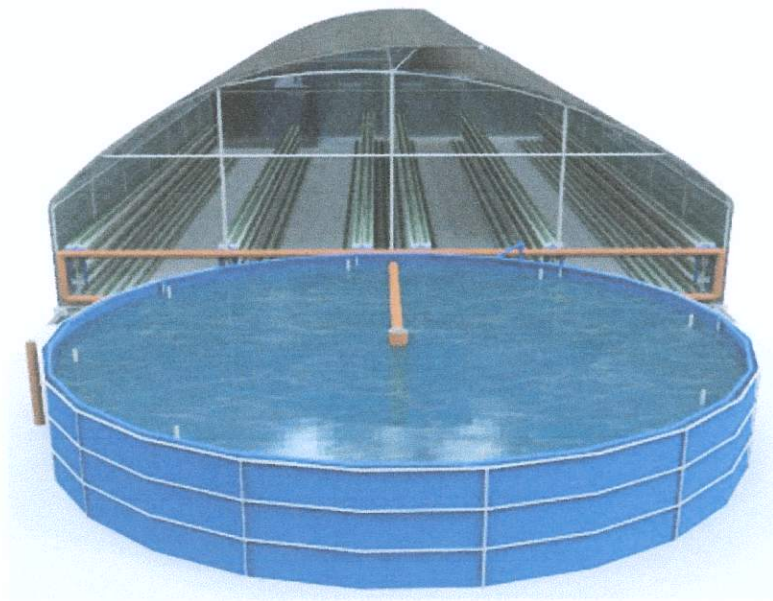
This unit is much bigger that can grow up to 600 fish. The plants planted in the PVC pipes are fed by the waste of the fish from the fish tank. And the plants clean the water that goes back to the fish through gravity. Along with the fish and their waste, microbes play an important role to the nutrition of the plants. These beneficial bacteria gather in the spaces between the roots of the plant and converts the fish waste and the solids into substances the plants can use to grow.





### **Aquaponics large: with 8m x 16m greenhouse and fish tank**

This aquaponic system can harvest more plants in a small space since it can design vertically for the hydro plots. Like a small aquaponics it has the same principle that use a fish waste and pulls up with the use of submersible pump and then the water with the waste will absorb by the roots of the plants and will go back to the nutrient solution container to gravity.



### **Hydroponics small: Miniature vertical (Cabinet type)**

This hydroponics unit is a cabinet type with nutrient solution in a container to pull up through the pump and the plants grow faster and sustainably with less labor and management. It can showcase the modern agriculture without affecting our health.



### Hydroponics Medium: NFT with greenhouse

This hydroponic unit is a larger type of it with greenhouse to protect from the pests and control the temperature. The plants can grow without using soil. It can use nutrient solution. The submersible pump pulls the nutrients up the highest PVC pipe and then the water with the waste will be absorbed by the roots of the plants and will go back to the nutrient solution container by gravity.

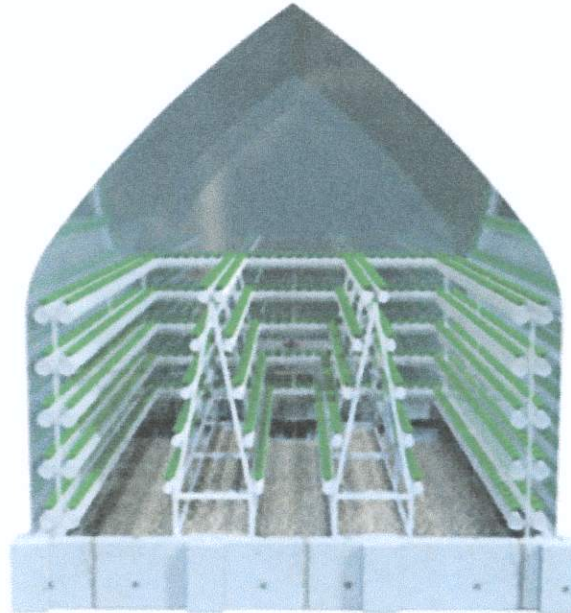


Figure 9. 3m x 4m Hydroponics Unit

### Hydroponics small: Kratckystyrobox 10 sets model

This set of styroboxkratcky hydroponics can grow vegetables in a small space without using soil but with nutrient solution for the nutrients of the plants in a stagnant water. This type is cheaper but also effective.



### Hydroponics small: NFT Basic model (A-type)

This hydroponic unit is an A-type system to grow plants without using soil. The plants will grow with nutrient solution in a container that pulls up nutrients with the use of the pump, and then this nutrient will absorb by the roots of the plants. It will go down through gravity to the solution container. The plants will grow faster and sustainably with less labor and management. It can showcase the modern agriculture without affecting our health.



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