

How to set up a Simple Aquaponics system, Made in Kenya

This is an 8 metre by 15 metre unit, we have like 3 flat grow beds improvised with locally available materials like; dam liner, just local timber and some metallic stands.

We have some nutritious fish pond water from the ponds which are inside the green house all the way in the back. The water is connected to a timer. It will distribute water from the pond into the flood and drain system, so periodically to flood and then drain water back into the ponds at the back. Also we have a bell siphon that helps in draining the water away from the grow bed and right now its functional because it is draining. It takes water all the way back to the pond.

Inside green house

Inside the green house we can see all these towers like 70 of them, all connected to the ponds. Here we can see the three ponds which are 2m wide by 70m in length and 1m depth and has a capacity of up to 14000 litres. At the moment the ponds houses 1200 fish per pond.

We cover the ponds so that we can prevent algae blooms which eventually affect the ph of the water upwards and also suck a lot of nutrients from the water.

Managing staggering production

What happens is we don't want to harvest everything at the same time because if we do fish are gonna miss out on the plants cleaning the water for them. We also have oxygen submersible pumps connected to the power station to oxidise the water.

Countering nutrient deficiency

Leafy vegetables, spring onions, and Chia seeds are grown here. What we usually do, we use vermin liquid as a foliar fertilizer to assist with nutrient deficiency. Its organic and works very well.