Aquaponics System introduction

AKUAKARE

General Information: Aquaponics

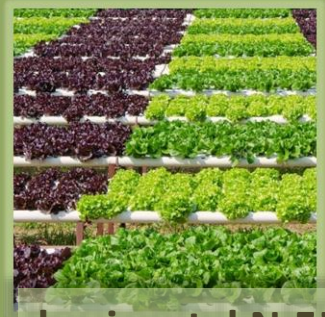
- Aquaponics is a new technology of agriculture that combines raising fish in tanks (recirculating aquaculture) with soilless plant culture (hydroponics). All natural fertilizer source from fish waste.
- The company's aquaponics plans are presented in 3 levels: industrial, semi-industrial and home models.
- There are three main components of an aquaponics system: plants, fish, and bacteria..

Plant Part

Different types of plant beds aquaponics and hydroponics systems

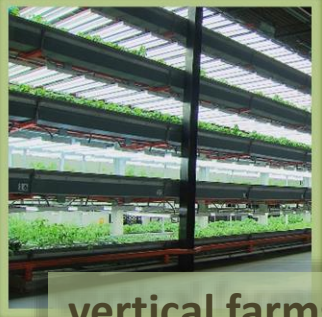
floating system

circular plantation system



horizontal N.F.T

oxy pots



vertical farms

U-shaped oxy pots

vertical N.F.T

floating system

In a raft system (also known as float, deep channel and deep flow) the plants are grown on polystyrene boards that float on top of water. Most often, this is in a tank separate from the fish tank. Water flows continuously from the fish tank, through filtration components, through the raft tank where the plants are grown and then back to the fish.

Suitable for:
Varieties of lettuce species

Oxy Pots

Plants grow in a mesh pot filled with small pebbles which are suitable for hydroponics. Roots grow out of the mesh pot, straight into an oxygen rich nutrient solution.
This gives them a constant, unlimited supply of nutrients and plenty of oxygen.
They are straightforward to assemble and disassemble to allow for easy potting up and will last for years. Air Pots are made of very tough, 100% recycled plastic and are delivered flat-packed.

Suitable for:
Solanaceae such as tomatoes

Comparing root growth

air-pot seed tray

conventional seed tray

U shaped

In U shaped oxypots the mesh sheets are stands in a rail , so beside the oxypots benefits, cultivation and harvesting is more easier and with a less use of manpower.

Suitable for:
Solanaceae such as tomatoes

circular plantation system

The transplants of vegetables are planted in the middle of the circle which rotates and pushes them further out as they grow. Plants move from the center of the circle toward the sides of plant bed, where they are ready for harvesting. It takes thirty days, with the circle rotating for one hour each day.

This system has many benefits, such as:

- using cultivating field efficiently
- Daily cultivation and harvesting
- It is well-matched with aquaponics system

Suitable for:

most of leafy quick growing plants specially varieties of lettuce

Horizontal N.F.T

Horizontal N.F.T plant beds are in two forms of vertical and horizontal parallel rows.

Suitable for:
Leafy plants with little bush and root

Vertical Hydroponic Tower

In these vertical towers you can grow more production even in small indoor spaces, making this ideal for urban farming. However ensuring that all plants get the equal amount of lights and space can be challenging.

Suitable for:

-Most of leafy plants which are sensitive to the amount of oxygen
-strawberries, Varieties of lettuce
and most of vegetables

Vertical farms

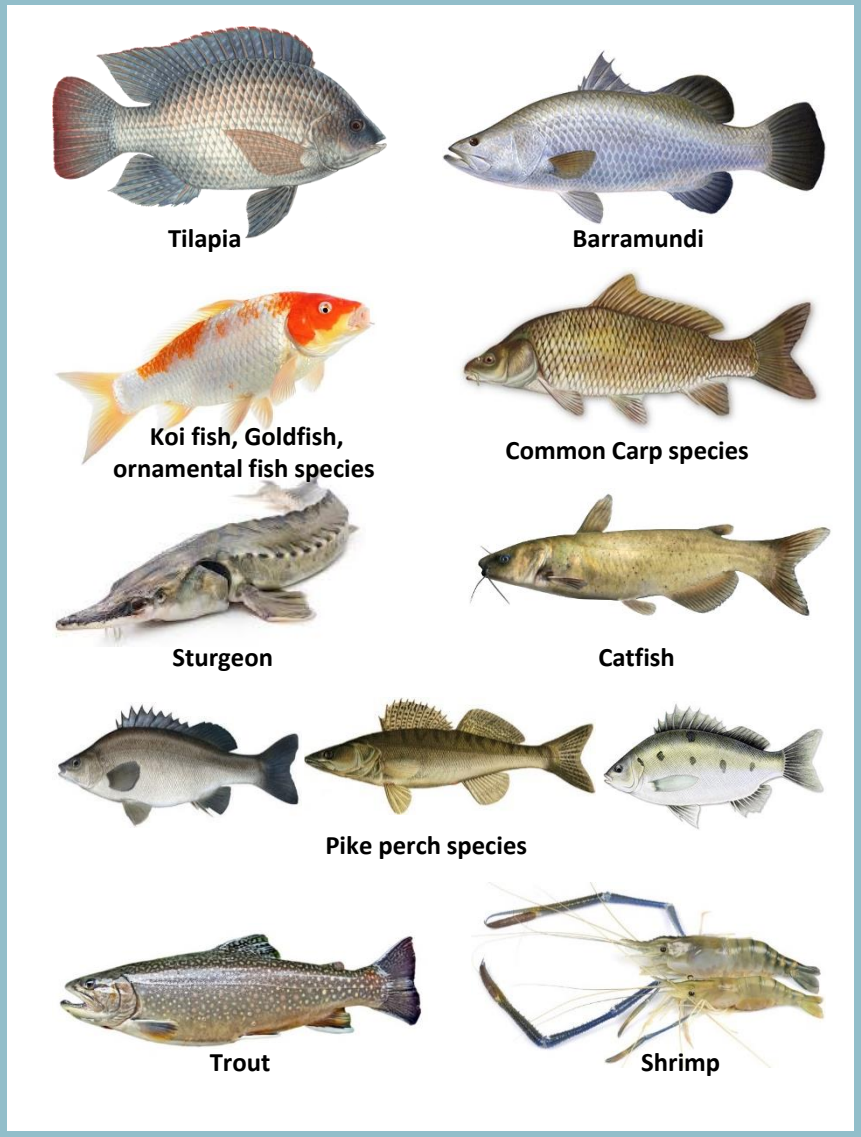
Vertical farming is the practice of growing produce in vertically stacked layers. Vertical farms attempt to produce food in challenging environments, like where arable land is rare or unavailable.. Vertical farming typically uses a mix of natural light and artificial light. Artificial lighting is often LED-based.

Suitable for:
This system is used for transplanting, forage production and cultivating the most of leafy quick growing plants.

Fish Part

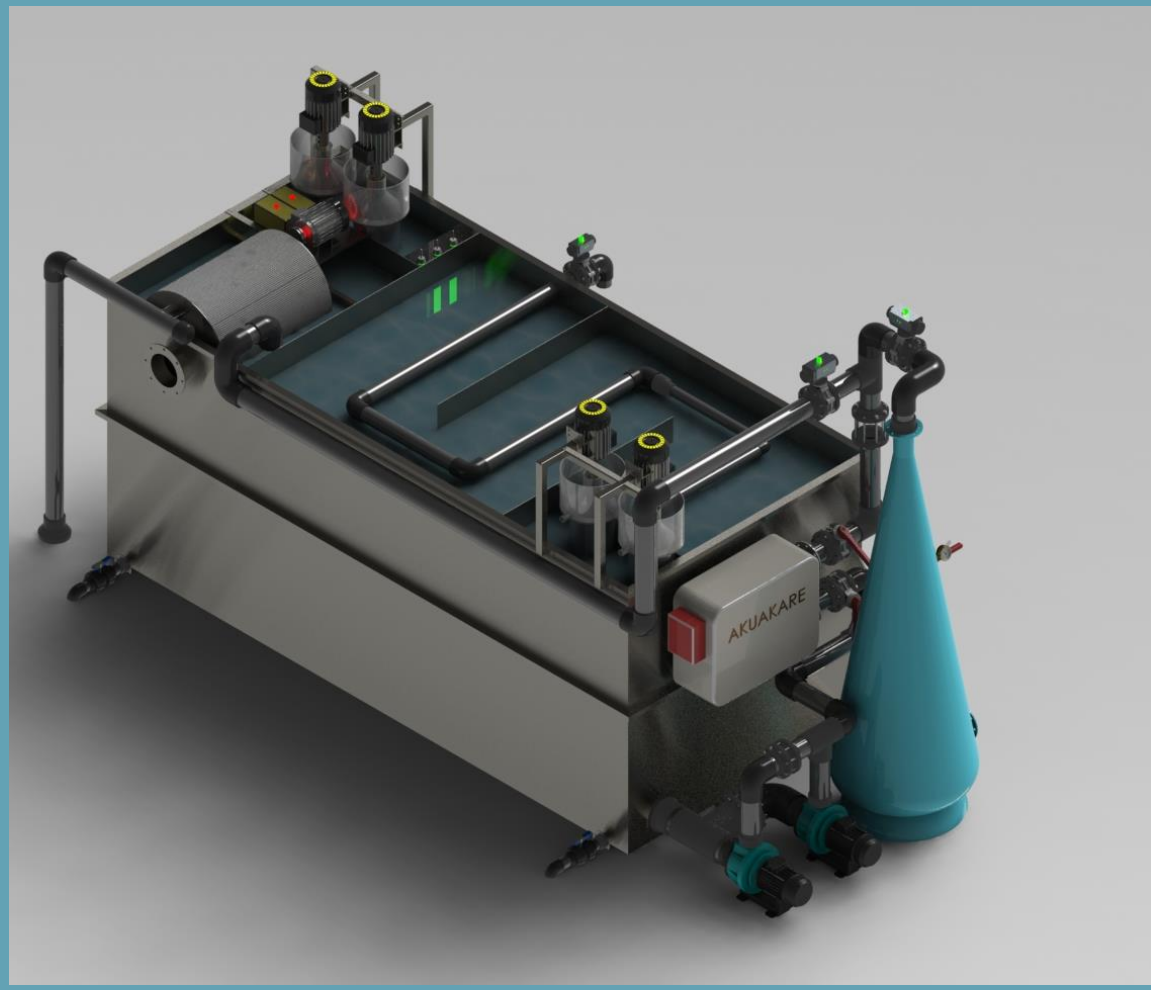
Best fish species for Aquaponics

Most of the fish species in fresh water and saltwater can be used for aquaponics due to the kind of plant, climate and the water quality. The picture is the best species which are the most used ones.



Water filtration system in aquaponics

This Water filtration system is a full package which covering all the water matters in aquaculture farms and it is a fully automatic system.



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