Aquaponics

A SYSTEM FOR FRESH FISH & FRESH VEGETABLES

Aquaponics is the symbiotic cultivation of plants and aquatic animals in a recirculating environment. ECOLIFE is implementing an aquaponics model in its San Diego office with the goals of 1) scientifically testing an aquaponic system, 2) teaching aquaponic workshops to the San Diego community as a sustainable living solution and educational tool and 3) providing an alternative food source for villages in Cameroon.

Educational Tool for Children of All Ages

ECOLIFE would like to share this system with local schools. Aquaponics provides a real life science opportunity for students to learn critical science concepts. Some of these concepts include: nitrogen cycles, bacterial role in ecology, function of water in ecology, living systems, life cycles, hydrodynamics of a bell siphon and the science of food production.

Assisted Care Facilities

ECOLIFE would like to offer elderly individuals living is assisted care facilities the opportunity to garden without the physical challenges of a conventional garden. One advantage of aquaponics as a garden system is that it lacks dirt. Also, the growing trays are adjustable for people who cannot bend down, and the fish can be farmed as food or as pets.

Commercial Applications

Commercial aquaponics are extensively underway in the United States but ECOLIFE plans to encourage further development. The current beleaguered oceans reflect our bushmeat crisis in commercially harvested fish. Aquaponics could provide an alternative food source to our dwindling seafood.

Developing Countries

ECOLIFE will be building an aquaponics model in Cameroon, to provide families with an alternative source of protein and fresh produce. This system can also be used as a micro-economic enterprise in developing nations struggling to live above the poverty line. The aquaponic system being developed by ECOLIFE is capable of producing 70 pounds of vegetables of every pound of fish. Additionally, the system is designed with inexpensive materials that are readily available for families with limited income.

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AQUAPONICS IS THE MOST WATER EFFICIENT AGRICULTURE KNOWN

Indoor or Outdoor Farm
Aquaponics is versatile. It is able to function as either an indoor or outdoor farm. Herb production is highly successful for indoor farms. It can also be done in small outdoor spaces such as a patio or balcony.

Collaborations
ECOLIFE is currently partnering with the University of California, San Diego Department of Mechanical Engineering Student project in aquaponics design efficiency. Specifically the students will be studying how to move water with the least amount of energy, storing energy in the form of elevated water and fine tuning the function of the bell siphon.

Aquaponics Works on A lot of Levels
With increased food demands globally, the strain on natural resources and scarcity of clean drinking water, Aquaponics can be a solution. There is a blooming conscientiousness that it makes sense for us to know how our food was produced, to buy food locally or to grow your own!

Aquaponic systems have near zero environmental impacts removing any need for fertilizers and chemicals from the agricultural process. The fish waste acts as a natural fertilizer for the crops.

An aquaponics environment can be set up anywhere. It provides fresh fish and vegetables for consumption, thus reducing the need to import these items from other countries. This could greatly reduce fuel consumption and all of these components decrease a communities' carbon footprint.

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