

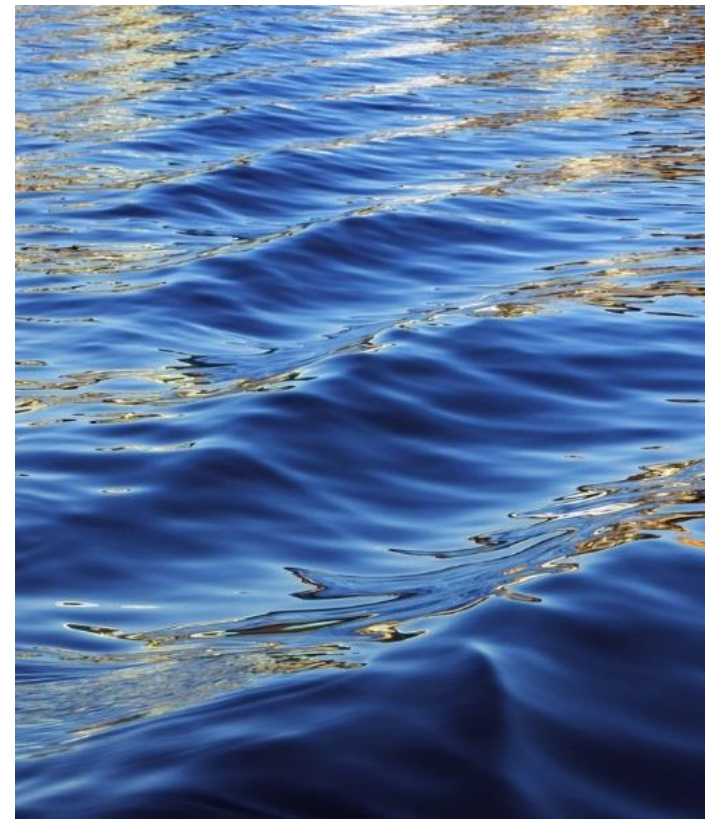


AQUAPONICS
NEW ZEALAND

Sustainable Urban Farming

Aquaponics 101

The fundamentals

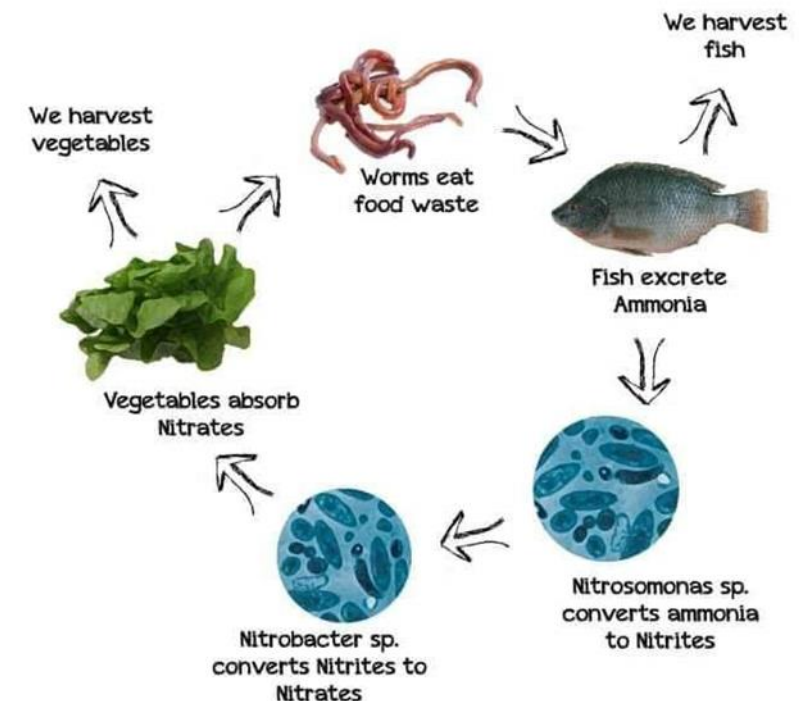


Aquaponics Design Course 101.

Workshop Content

Learn about:

- Aquaponics Basics
 - Small System Design
 - Small Farm Design
 - Commercial Aquaponics
 - Fish Management
 - Solving Plant Deficiencies
 - Plant Management
 - Different grow bed styles
 - Legalities in NZ
- Biofilters
 - Radial Flow Filters
 - Coupled and Decoupled Systems
 - Plumbing Parts Explained



What is Aquaponics?

Aquaponics is an integrated Aquaculture (growing fish in tanks) and Hydroponics (growing soilless plants) system that mutually benefits both environments.

Aquaponics becomes an emerging industry

- Research into aquaponics only commenced in the 1970's and is continuing with many universities across the world. They are refining technologies to improve output. In particular, Dr. James Rakocy of the University of the Virgin Islands has been working to refine aquaponic systems over the past 25 years mainly focusing on deep water culture systems. Aquaponics has gained momentum over the past few decades. In the early 2000's large commercial aquaponics operations were implemented and in-depth research into their productivity was undertaken.

Introduction

Imagine a world where we can meet the demand for healthy, organic food in our own backyards.

Many nations around the globe are adopting the Circular Economy concept as a model to reduce waste and environmental impact. Aquaponics is purely Circular, being done in a Recirculating Aquaponic System with low water use and almost zero waste output. If the practice of Aquaponics can become a hobby for New Zealander's where they produce both healthy edible fish and vegetables, we will be building towards a future of urban food security, positive environmental impact and resilience through reducing reliance on visitors and unsustainable food production systems.



Why Aquaponics?

- We must transform our food systems to achieve healthy people and a healthy planet
- “How we produce and consume food is the single biggest threat to nature today. It’s a major driver of the emergence of infectious diseases, unhealthy diets are the biggest cause of non-communicable diseases and 1.9 billion people are obese or overweight. At the same time, we waste one third of all the food produced, and all the natural resources that went into its production, but nearly 700 million people go hungry every day.” WWF
- https://wwf.panda.org/discover/our_focus/food_practice/?gclid=CjwKCAiA65iBBhB-EiwAW253W7fl458_IWfmt5iyDqF8W6SKWkaj_BwQPEm1alvbxEO8NmzobPlmSBoC35YQAvD_BwE

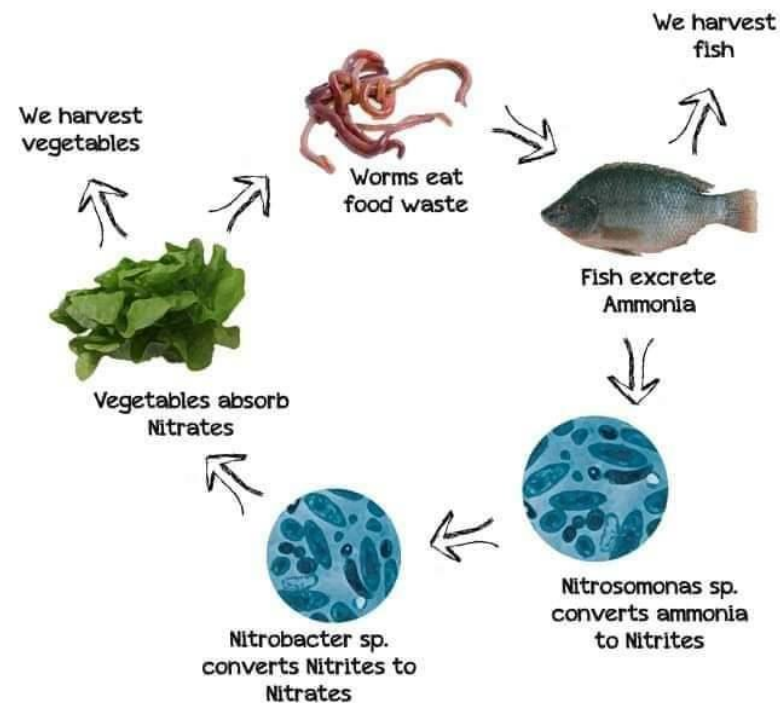
Where did it start?

- Aztec Indians 1000AD
- Chinese Rice Paddies 11000BC
- For Aquaponics NZ
 - Join our workshop to find out more about the history and future of Aquaponics in NZ.
- Can we produce Kai for everyone?
 - YES



How does Aquaponics work?

- The fish waste is changed to nutrients and absorbed by the plants which then purifies the water for the fish, cultivating a wonderful condition for them to grow in.
- The only external input to the system is food for the fish, power for the pump and if indoors power for lights. Both systems complement each other in practical interdependence.



How does Aquaponics work?

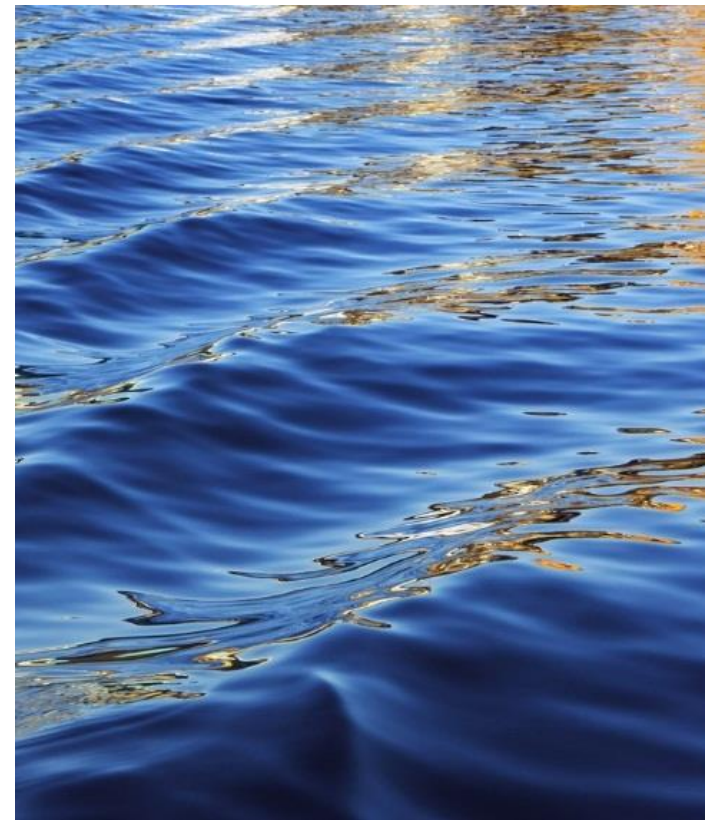
- So essentially if you have happy and content fish, you have an amazing system that will produce fresh food for you all year round.
- Imagine sharing berries or chillies with your family & friends in the middle of winter!





Aquaponics

Scale and Size



A small indoor system

The EcoStation



Custom Media Bed System



The Chop and Flip!

Fish Tank

Filter

Media Bed

Sump tank



Residential System Design – This is where the workshop will be held.



A Commercial Farm



Questions?

Register for our Aquaponics Design Course 101.

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This is an introduction course to give you the knowledge to start. This could lead to more advanced courses we run or even an apprenticeship on an Aquaponic Farm.