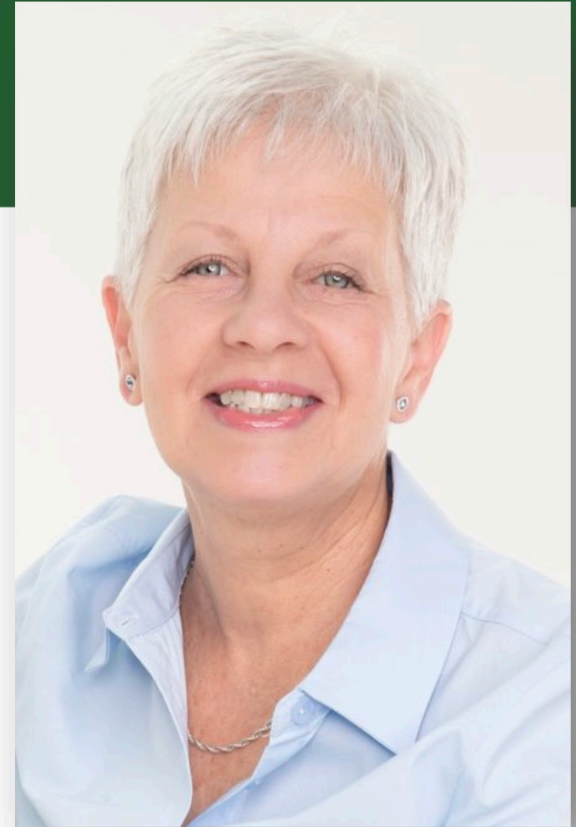


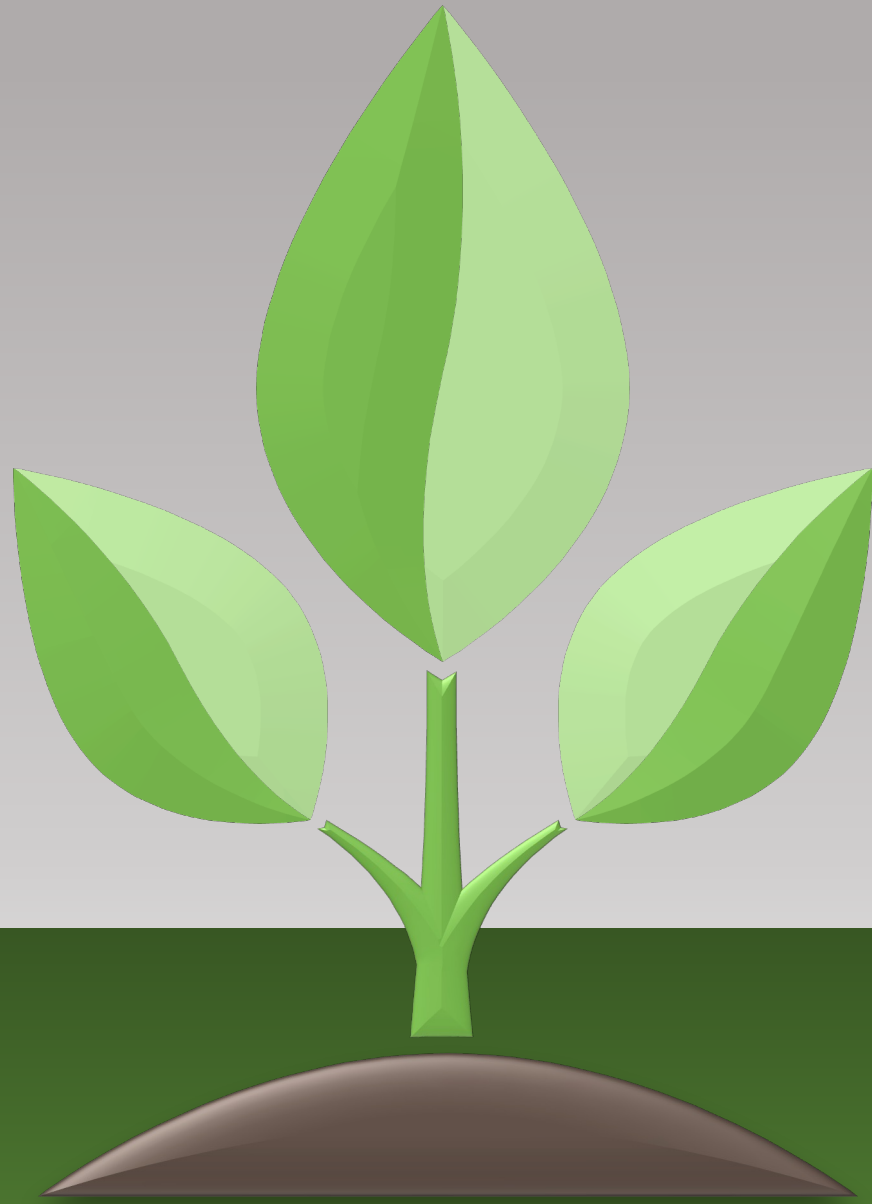
Coleen Cronje

Scalable Hydroponics for boutique farmers in the South African Environment

A background in all things green and growing, was solidified by studying a degree in Plant Pathology at the University of Pretoria. The love of technology as well as a desire to do things a little more cheaply, a little more wisely and a little less cumbersome than the current assumptions, led to adaptation of the oldest plant growing technique known to man. The result is a small company growing lettuce for boutique coffee shops as well as a farm stall outlet on the property.

When not active in hydroponics, Coleen is part of the first online school in South Africa.





Scalable hydroponics for boutique farmers in the South African environment

Coleen Cronje
Aqualife Products Pty Ltd





This is NOT what we
do....





eNCA
NO FEAR. NO FAVOUR.

Ebb and Flow

Drip systems

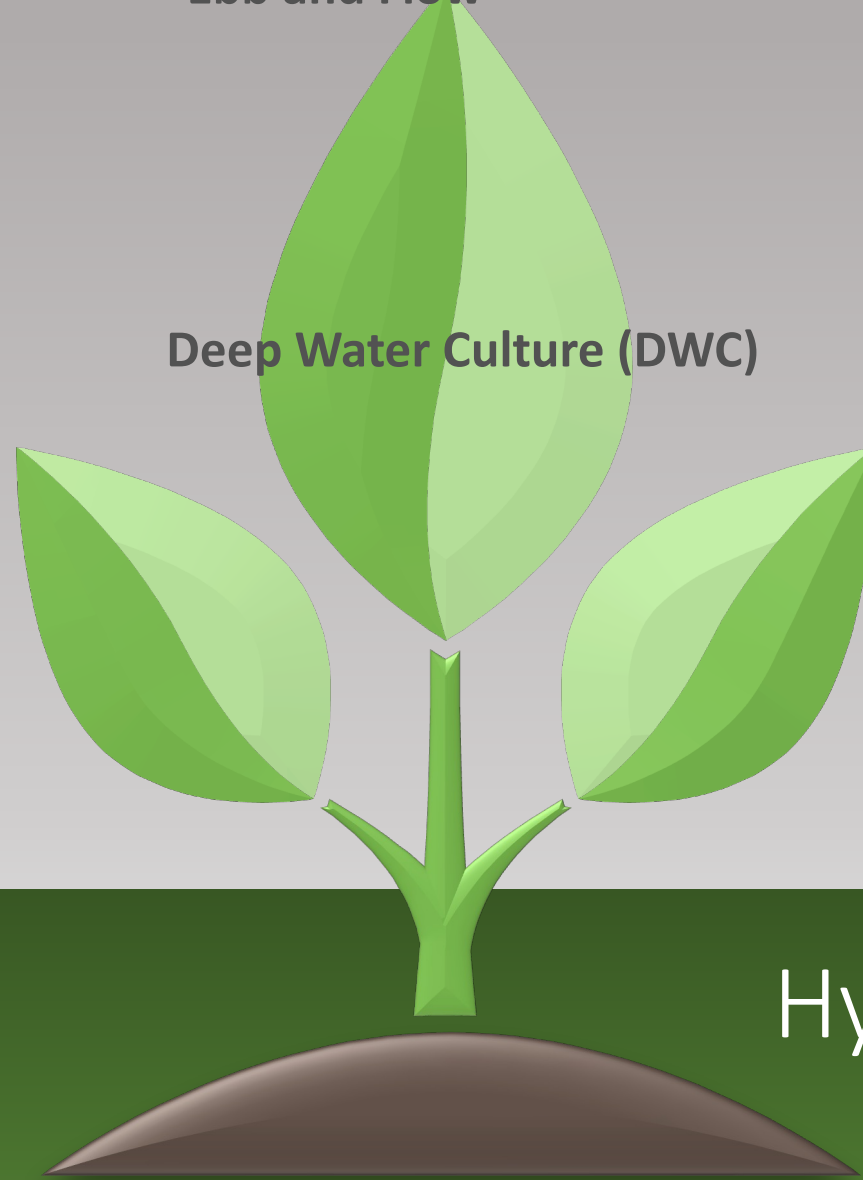
Nutrient Film Technique
(NFT)

Kratky

Deep Water Culture (DWC)

Aeroponics

Wick Hydroponics

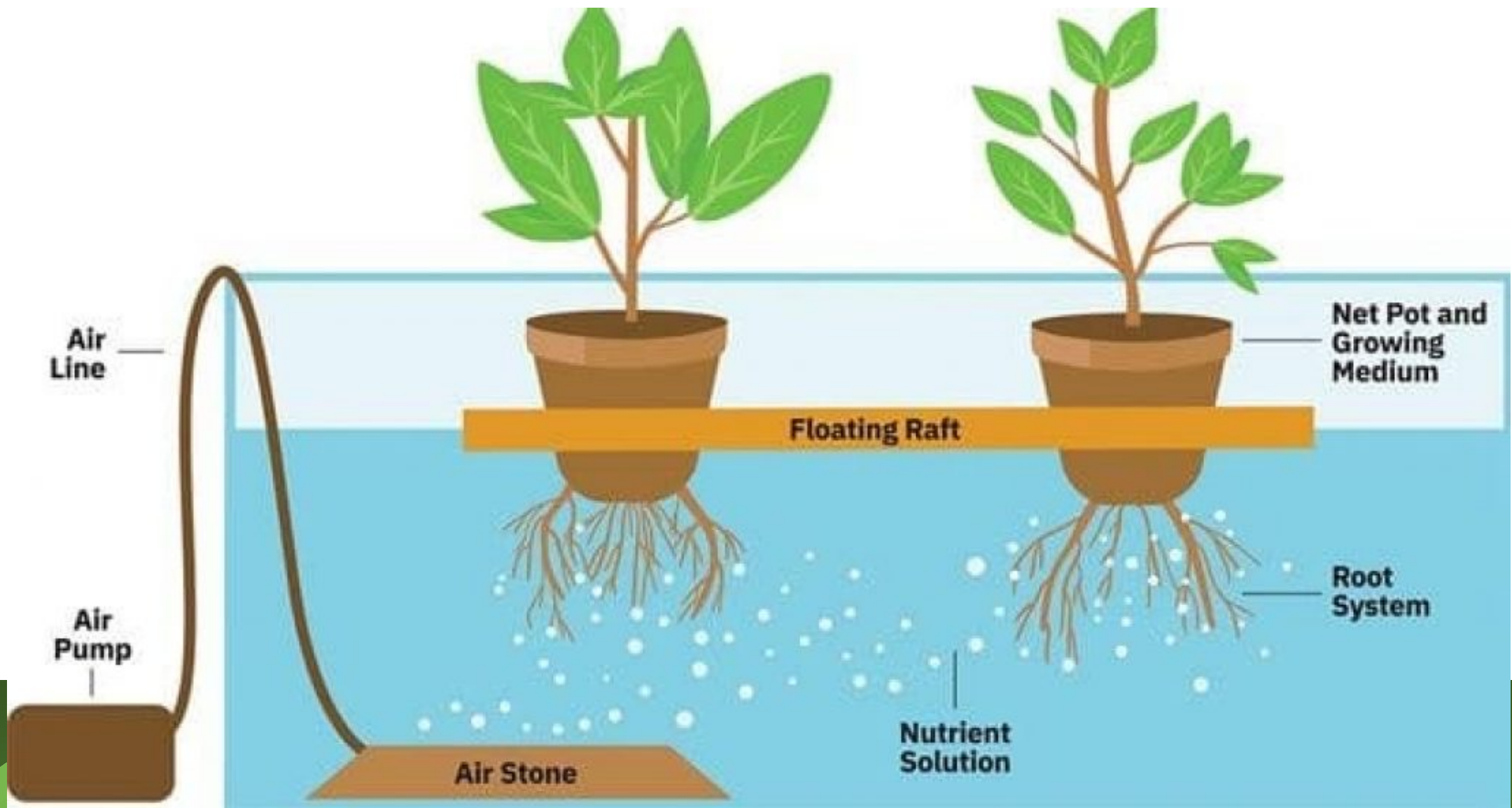


Hydroponic systems

Types



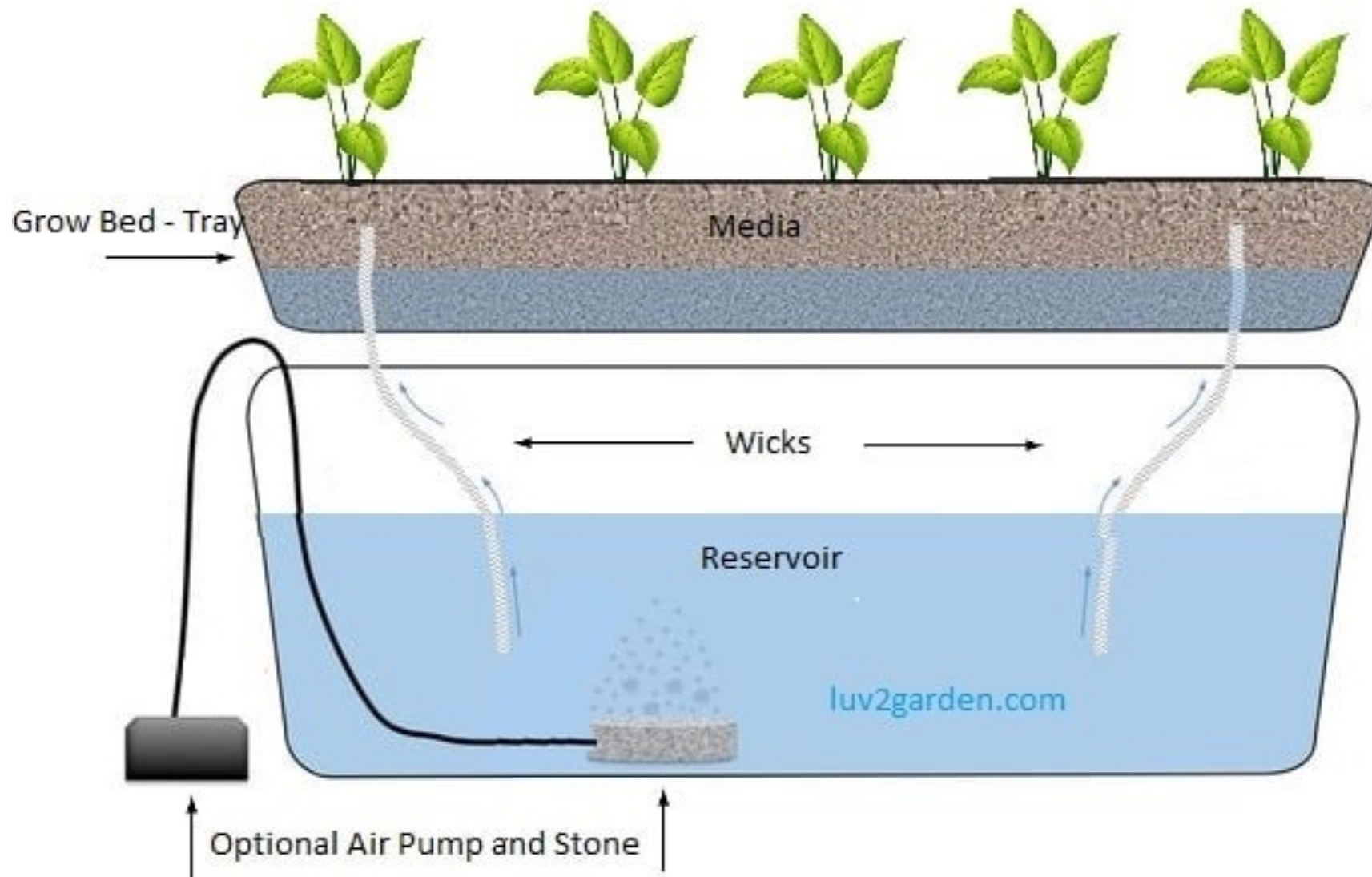
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Deep water culture

<https://climatebiz.com/dwc-hydroponics/>; 18/11/2022





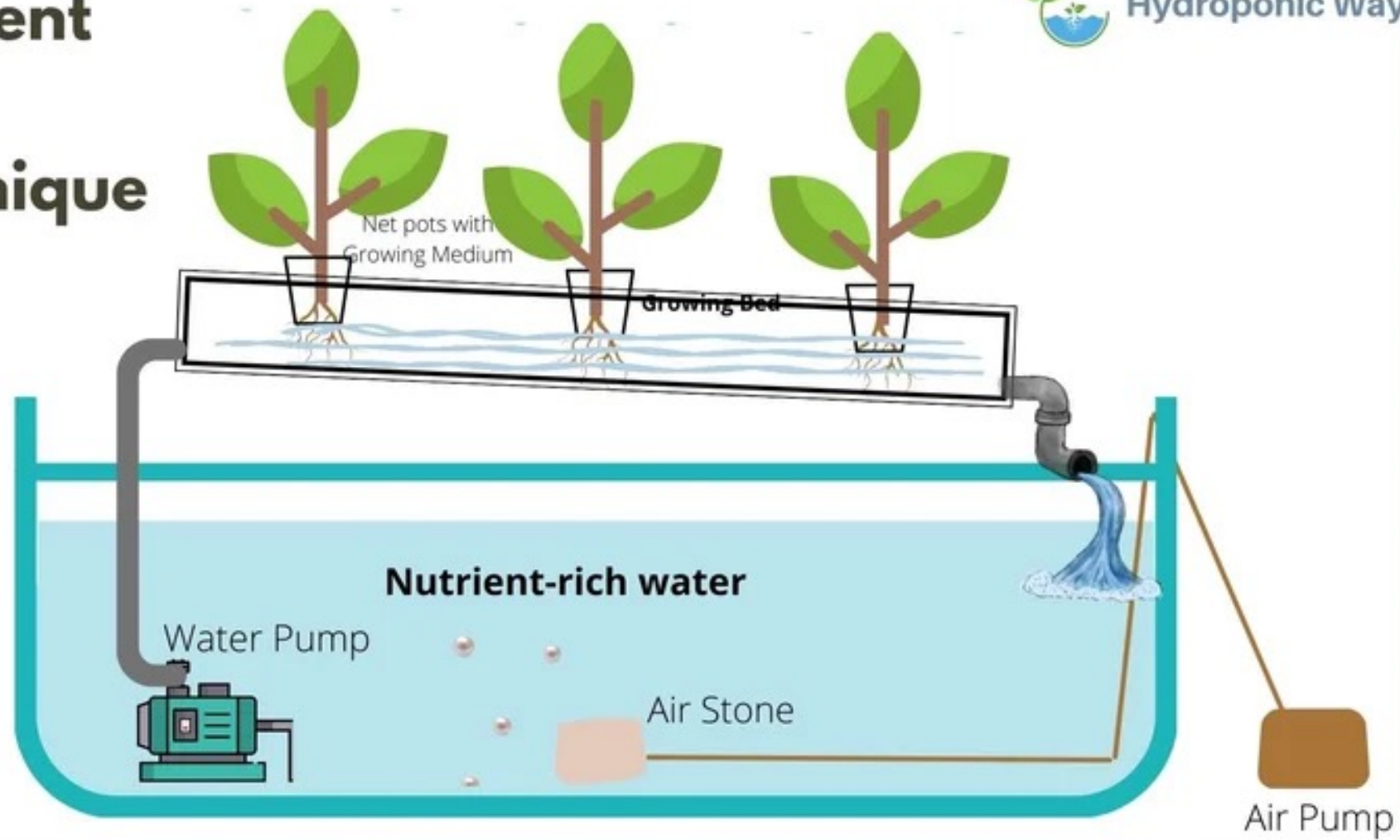
Wick hydroponic system

<https://luv2garden.com/how-to-build-a-hydroponic-wick-system/>; 18/11/2022



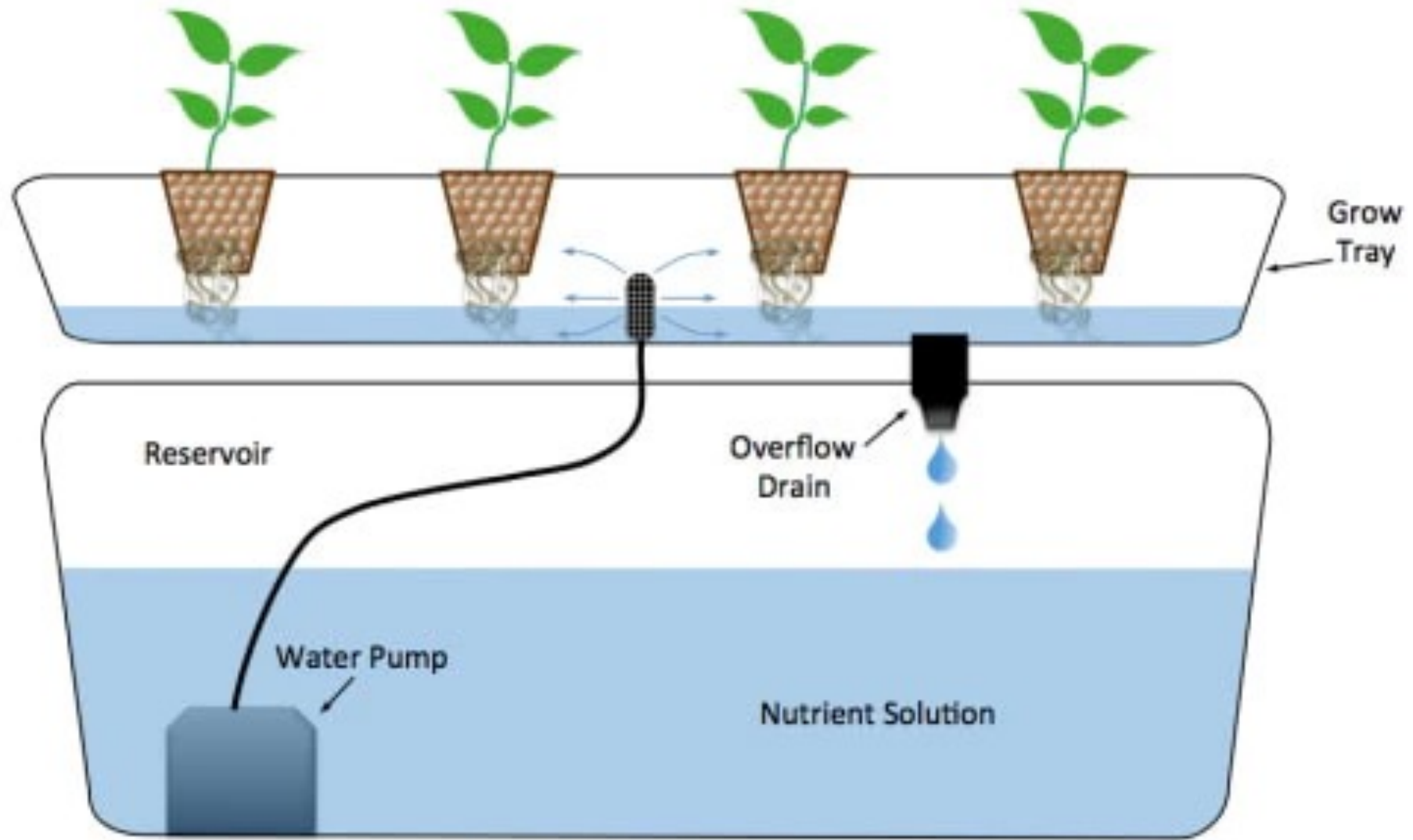
<https://gardeningheavn.com/hydroponic-wick-system/>; 18/11/2022

Nutrient Film Technique



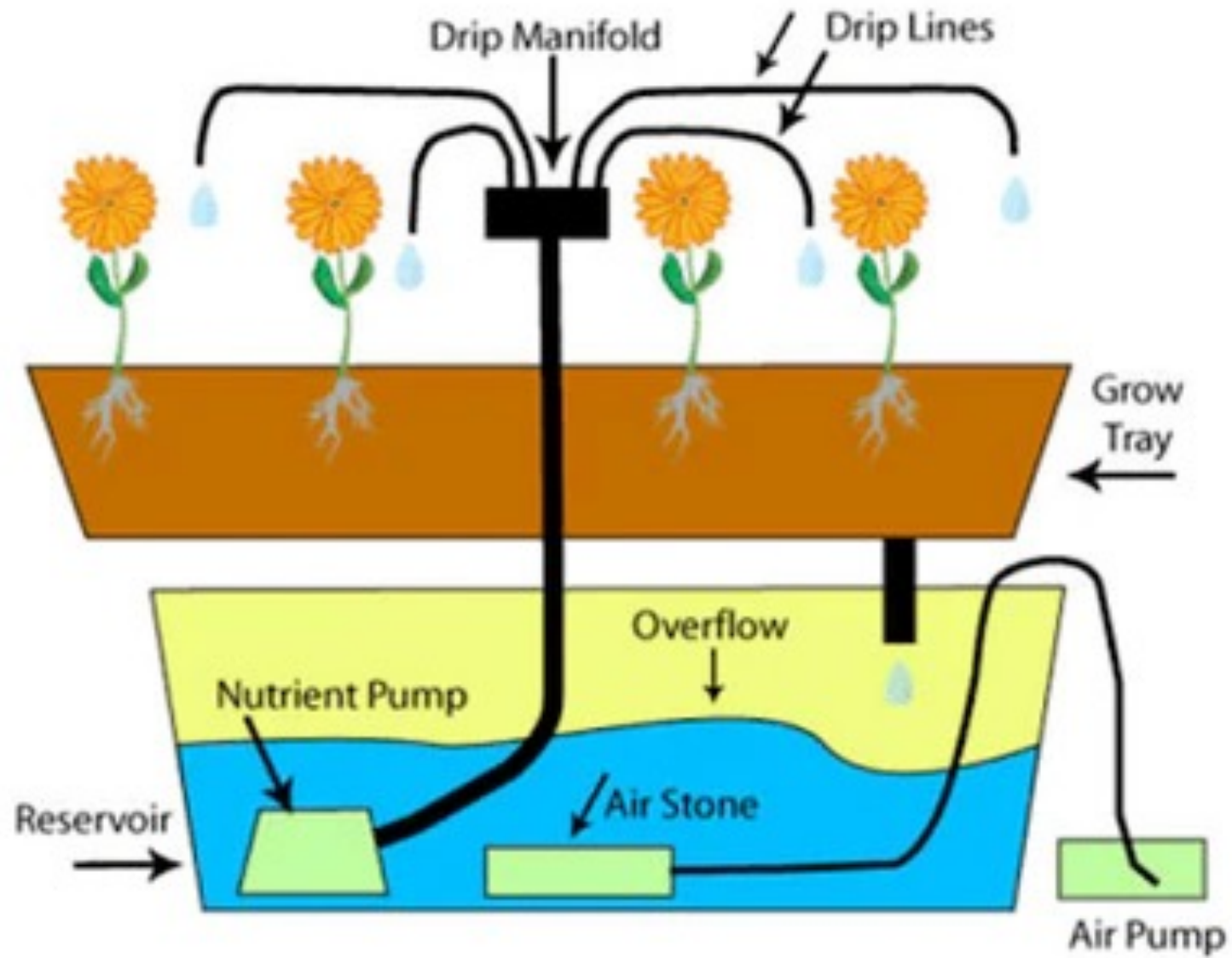
Nutrient film technique





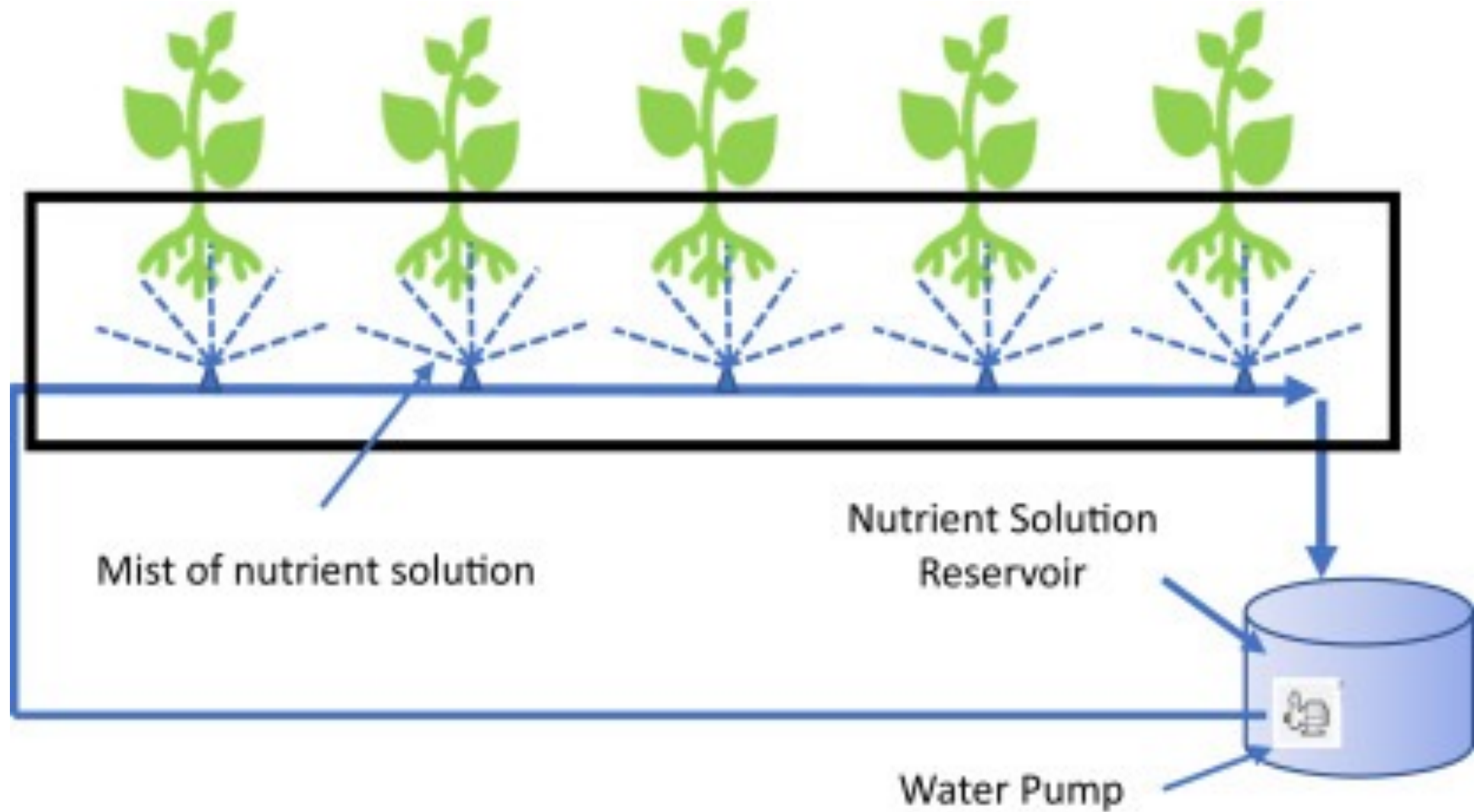
Ebb and flow systems





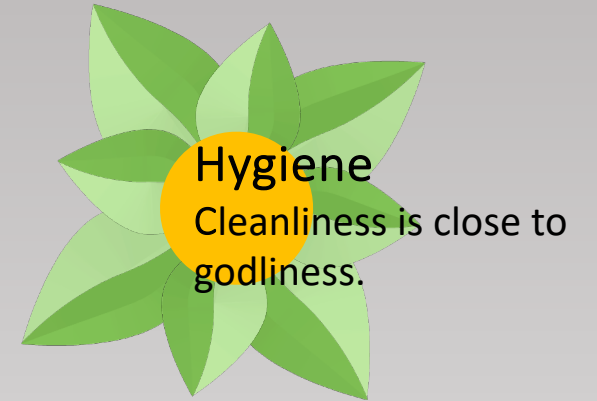
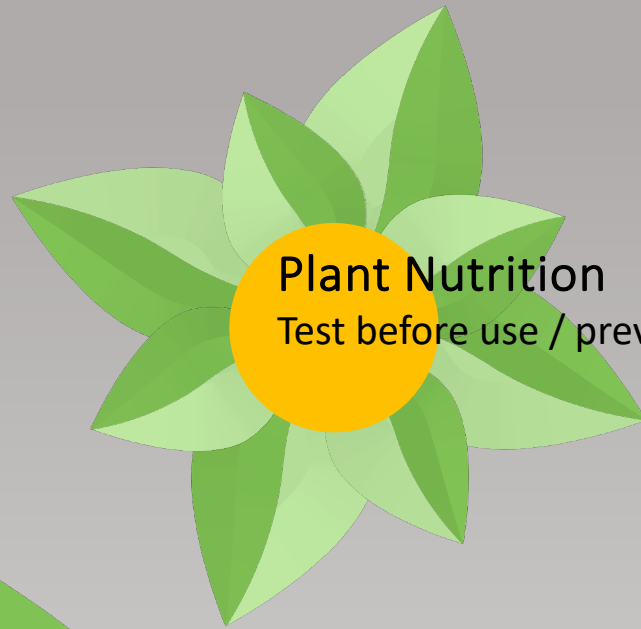
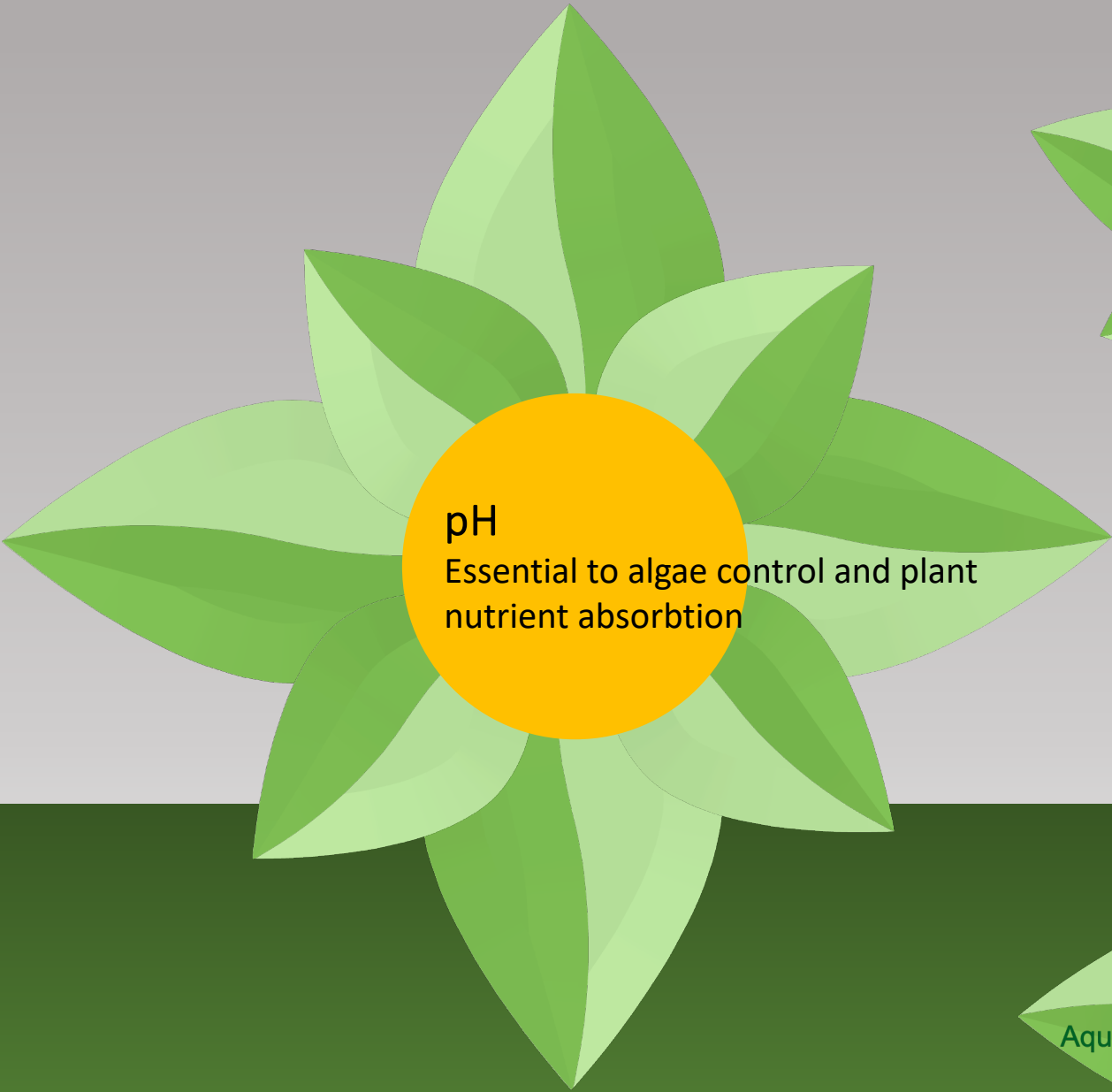
Drip systems





Aeroponics

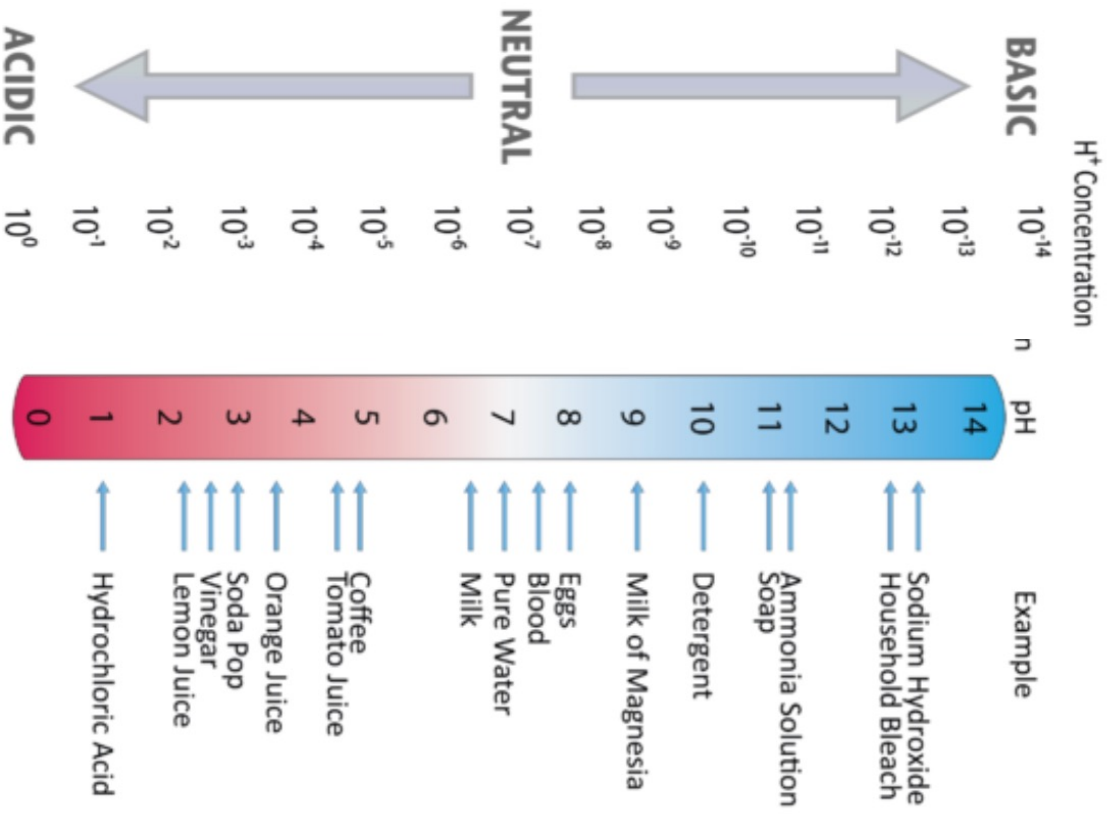




Essential growth factors



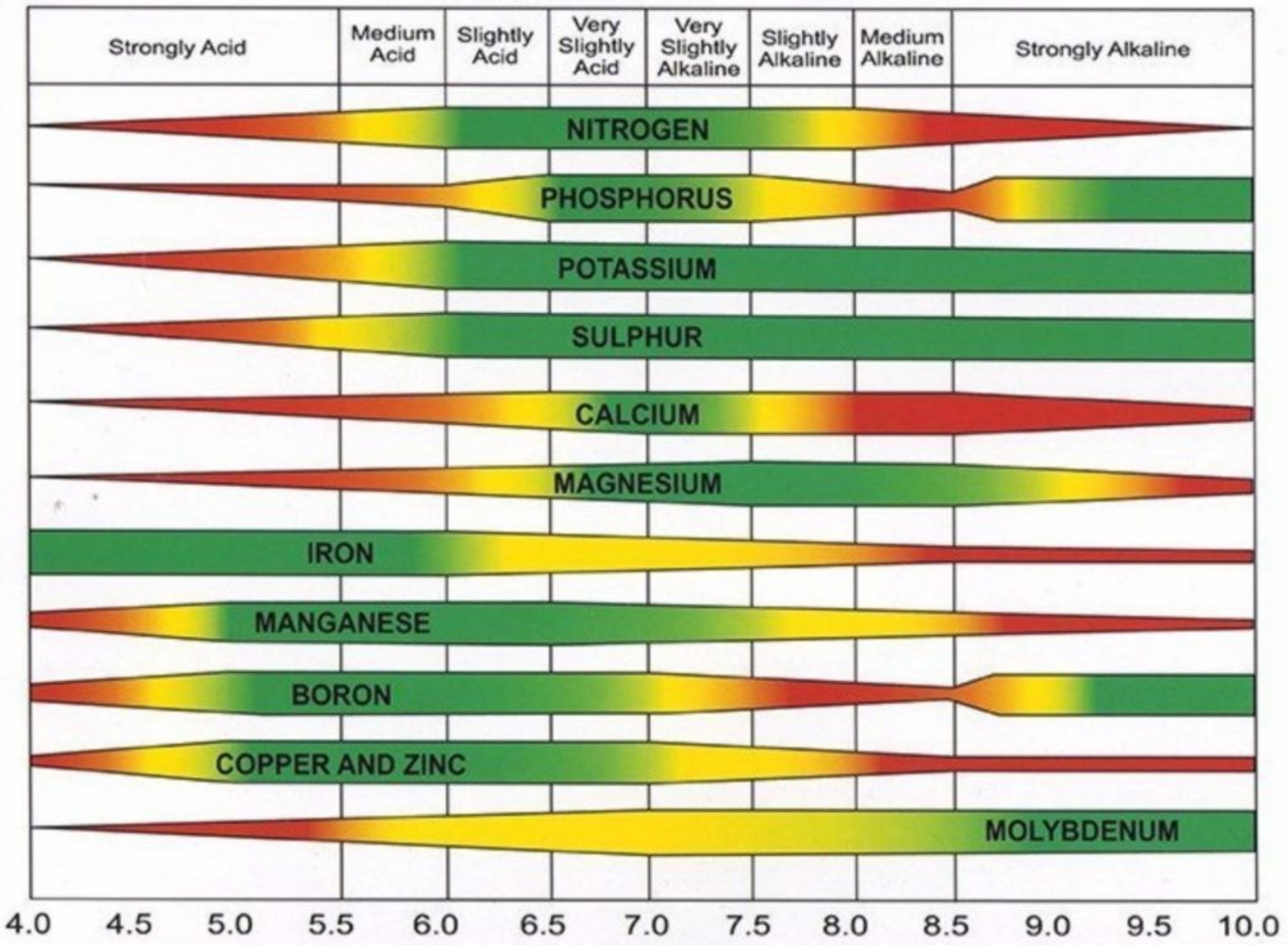
Keep it simple



pH



How soil pH affects availability of plant nutrients.



SOURCE: <https://www.emporiumhydroponics.com/what-is-ph-1-to-14>



Digital PH Meter Tester Pen with ATC and LCD Monitor

★ 2.8 13 Reviews

In stock CPT JHB When do I get it?

Sold by [The Ultima Store ZA](#) • Fulfilled by Takealot

- Eligible for next-day delivery or collection.
- Eligible for Cash on Delivery.
- Hassle-Free Exchanges & Returns for 30 Days.
- 6-Month Limited Warranty.



Essentials pH Meter

R1 300.00



7.0 pH Calibrating Solution

R40.00 – R140.00



pH





Plant nutrition





EHG
Easy Hydro Grow
For Soil & Hydroponics

NUTRIENT GUIDE

Week	1	2	3		1	2	3		4	5	6	7	8
mls per 10 litres	18 H ☼				12 H ☼								
Grow	2.5	2.5	7	F L U S H	20	20	0	F L U S H	0	0	0	Ph Balanced Water Only	
Micro	2.5	2.5	7		10	10	10		10	10	10		
Bloom	2.5	2.5	7		0	0	20		20	20	20		

PLEASE NOTE: This guide is not intended as a comprehensive grow guide but designed to ensure proper utilization of these nutrients. For further information consult your hydroponics supplier, appropriate literature, experienced growers or reliable internet sources.

Plant nutrition



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Deficiency Chart of Micronutrients

Boron: Discoloration of leaf buds. Breaking and dropping of buds

Calcium: Plant dieback. Tender leaves pale. Starts from the tips. Eventually leaf buds

Sulphur: Leaves light green. Veins pale green. No spots.

Iron: Leaves pale. No spots. Major veins green.

Manganese: Leaves pale in color. Veins and venules dark green and reticulated

Copper: Pale pink between the veins. Wilt and drop.

Zinc: Leaves pale, narrow and short. Veins dark green. Dark spots on leaves and edges.

Molybdenum: Leaves light green/ lemon yellow/orange. Spots on whole leaf except veins. Sticky secretions from under the leaf.

Magnesium: Paleness on leaf edges. No spots. Edges have cup shaped folds. Leaves die and drop in extreme deficiency.

Potassium: Small spots on the tips, edges of pale leaves. Spots turn rusty. Folds at tips.

Phosphorus: Plant short and dark green. In extreme deficiencies turn brown or black. Bronze colour under the leaf.

Nitrogen: Stunted growth. Extremely pale color. Upright leaves with light green/yellowish. Appear burnt in extreme deficiency

THE COLOUR REPRESENTED ARE INDICATIVE.
THEY MAY VARY FROM PLANT TO PLANT

Nutrient deficiencies

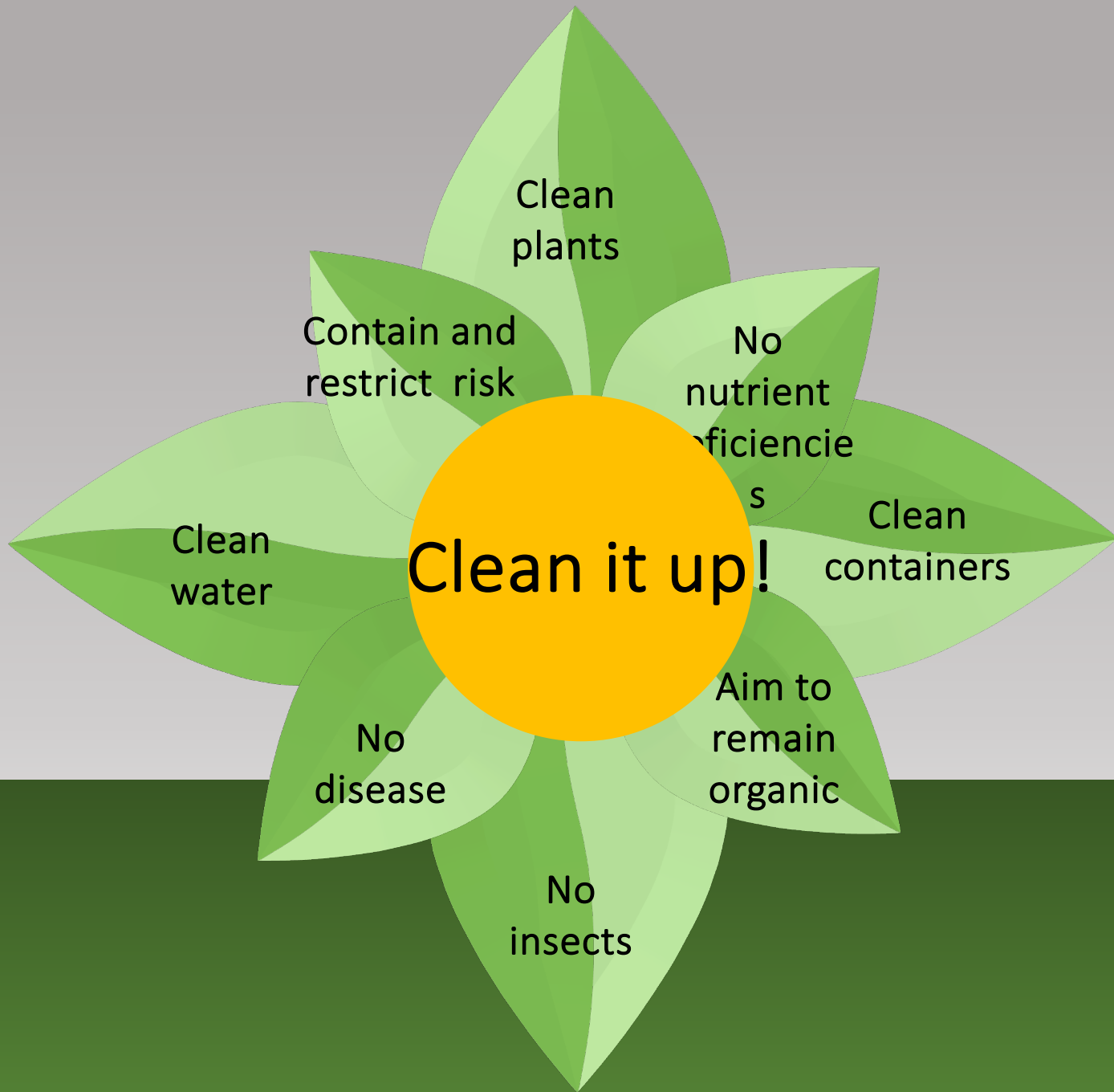


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Hygiene





Hygiene

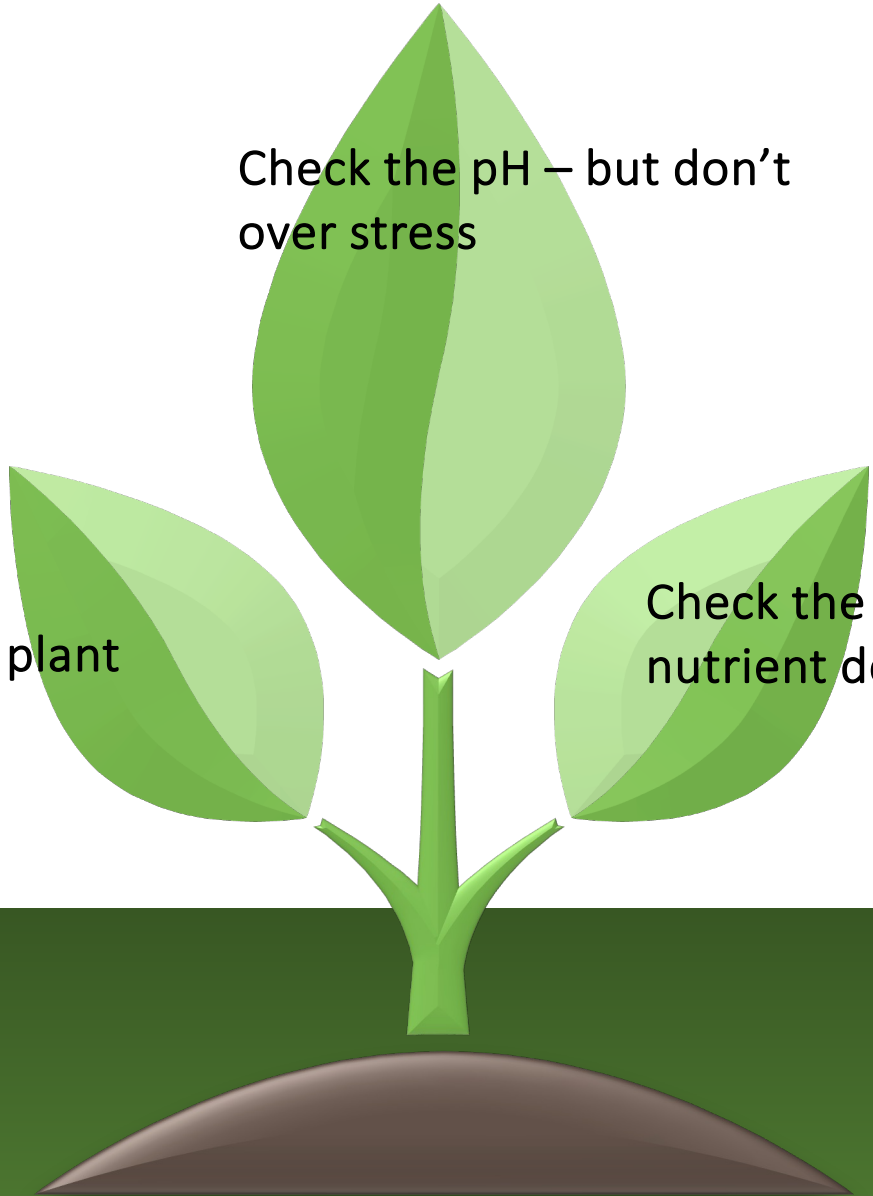




Hydroponic school fees that you do not need to pay

Secrets that I learned the hard
way





Check the pH – but don't
over stress

Don't drown the plant

Check the prescribed
nutrient dosage



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Our system- the start



























Our system- now





















Our products







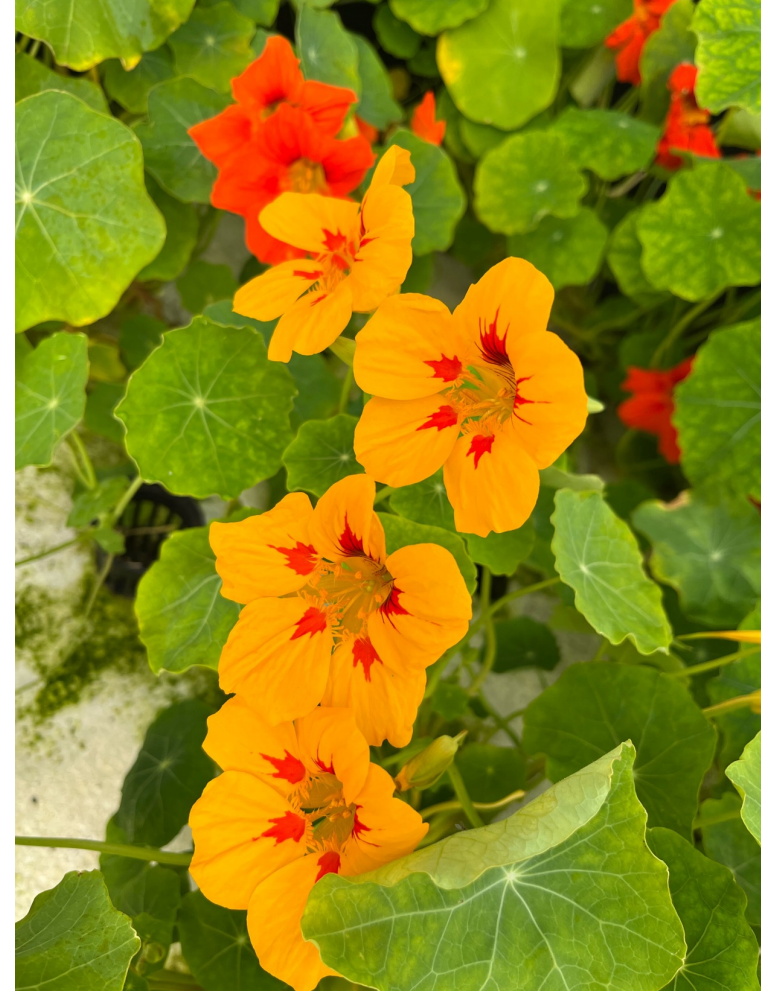


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We tried .. but failed







Challenges ..





Water quality

pH

Hygiene for disease control

Insect control –
Biogrow Pyrol once
a week

Relate your money
investment to the return
from your crop (ROI)



Challenges
.. and solutions



Challenges
.. and unsolved (and loadshedding of course)



Thank you ..

