

Rotary District 9350 Food Gardens Webinar

Food Garden Tunnels



HandPicked

Rotary District 9350 Food Gardens Webinar

Food Garden Tunnels

AGENDA

- 16:58 Home Food Garden Video
- 17: 01 **Introduction (Doug Batchelor)**
- 17:05 **Transforming Low-Income communities from food insecure consumers to producers - Louis Janse van Rensburg (Fresh Life Produce)**
- 17:25 Questions
- 17:30 Robust Tunnel Construction - Victor Roestorff (Green Sprouts)**
- 17:40 Questions
- 17:45 **DIY Tunnels – Bevan Thomas (Cape Biosphere)**
- 17:55 **Gardening Tips - Michelle Nel (RC Helderberg Sunrise)**
- 17:58 Questions
- 18:00 **Closure - Geraldine Nicol**

Why Food Tunnels?

- Only 10% of the water used in an open garden is used in the tunnel.
- The turnover from the tunnel is about eight times that of an open garden.
- A tunnel protects the vegetables from the environment (hail/insects).
- The Growing Season Extension
- It protects crops from cold temperatures and frost, as well as overly rainy seasons
- Reasonable Priced, Quick Return On Investment (2-3 years)
- Easy To Relocate
- Simple To Expand

Transforming Low-income communities from food insecure consumers to producers

Louis Janse van Rensburg

<https://freshlifeproduce.co.za/>



FIRST BREAK 2016 - ROOFTOP SYSTEM AT INTAKA ISLAND CAPE TOWN





Technology Solution: Address household's Nutritional Need

Guiding Principles

Individuals must be able to grow their own food:

1. No matter *where they are*;
2. No matter their *level of knowledge*; and
3. No matter their *financial circumstances*.



Solution

Therefore, our Africanized Hydroponics solution had to be:

1. In *compact kit* form that can *transport easily*;
2. *Simple* to put together and use; and
3. *Affordable* with *high yields*.





The African Grower

An *Africanised* vertical growing system *that*.



Needs no running water or electricity



Saves space (up to 40 plants per Kit)



Saves water (1 /10 of the water used in soil)



Saves effort (no bending and feeding)



Saves time (can hang from any appropriate fixture)



Saves money (re-usable)



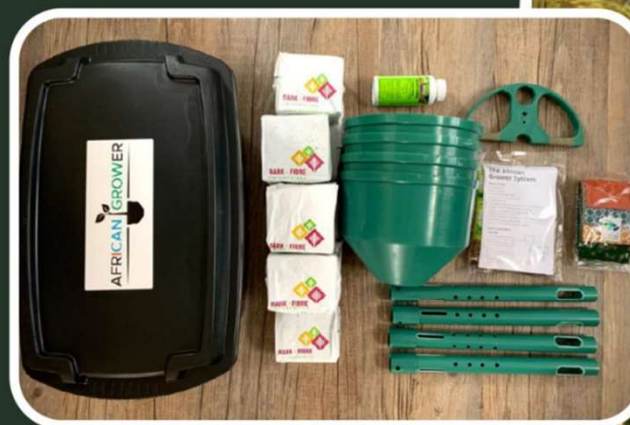
Saves the environment (uses re-cycled plastic and eco friendly Coconut coir as grow medium)



Is versatile (can be used in different configurations) – starting with one “pod”



Is pest resilient because it is suspended in the air



DISTRICT 9350



FRESH LIFE PRODUCE



IMAGINE
ROTARY



Why does community agriculture fail so often

The Problem

It is virtually impossible to link the formal to informal economy

1. Require substantial volume;
2. Require a certain standard of product
3. Require a consistent supply



Solution

Transform the Informal economy so that it can supply to itself and create its own circular economy

1. Establish a community agricultural incubators
2. Help this agri incubator to grow a network of out growers
3. *Create an internal market at the incubator that can purchase produce at a higher price*



Fresh Life Produce Solution Stages



FLP Stage 1



Establish Local **Agricultural incubators** that transform communities from food insecure consumers to producers using the African Grower

Agri-Incubator: Hammarsdale and Durban Samples



Use **incubators** to create **Agri-preneurs & Home Growers**

Hammarsdale Home Growers



FLP Stage 3



Equip Agri- Incubators to start Food Processing & Value-add to become the Internal market for the community and supporting local ECD centres

Internal Market Access



Local Kitchen
For Preparation of Meals



A meals fund is created to buy
produce locally and create
healthy meals for ECD centers

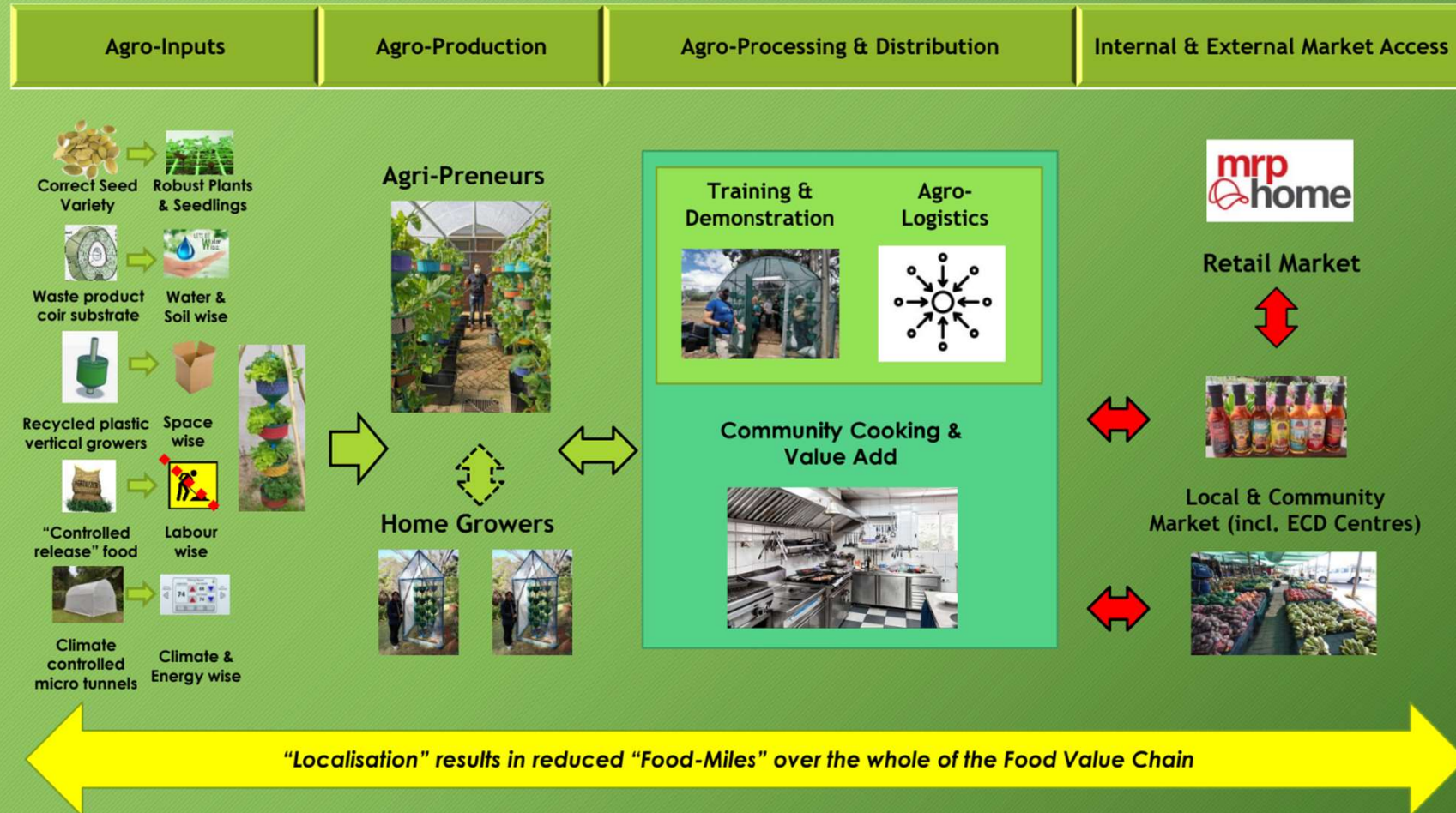
The local Hub becomes the
local market where all the
produce from the
community can be sold



Local & Community Market



Only by enabling an entire local value chain can an Agri-Incubator become sustainable



Systemic Community Solution



National Footprint



1596 African Growers used in projects based in underprivileged communities.



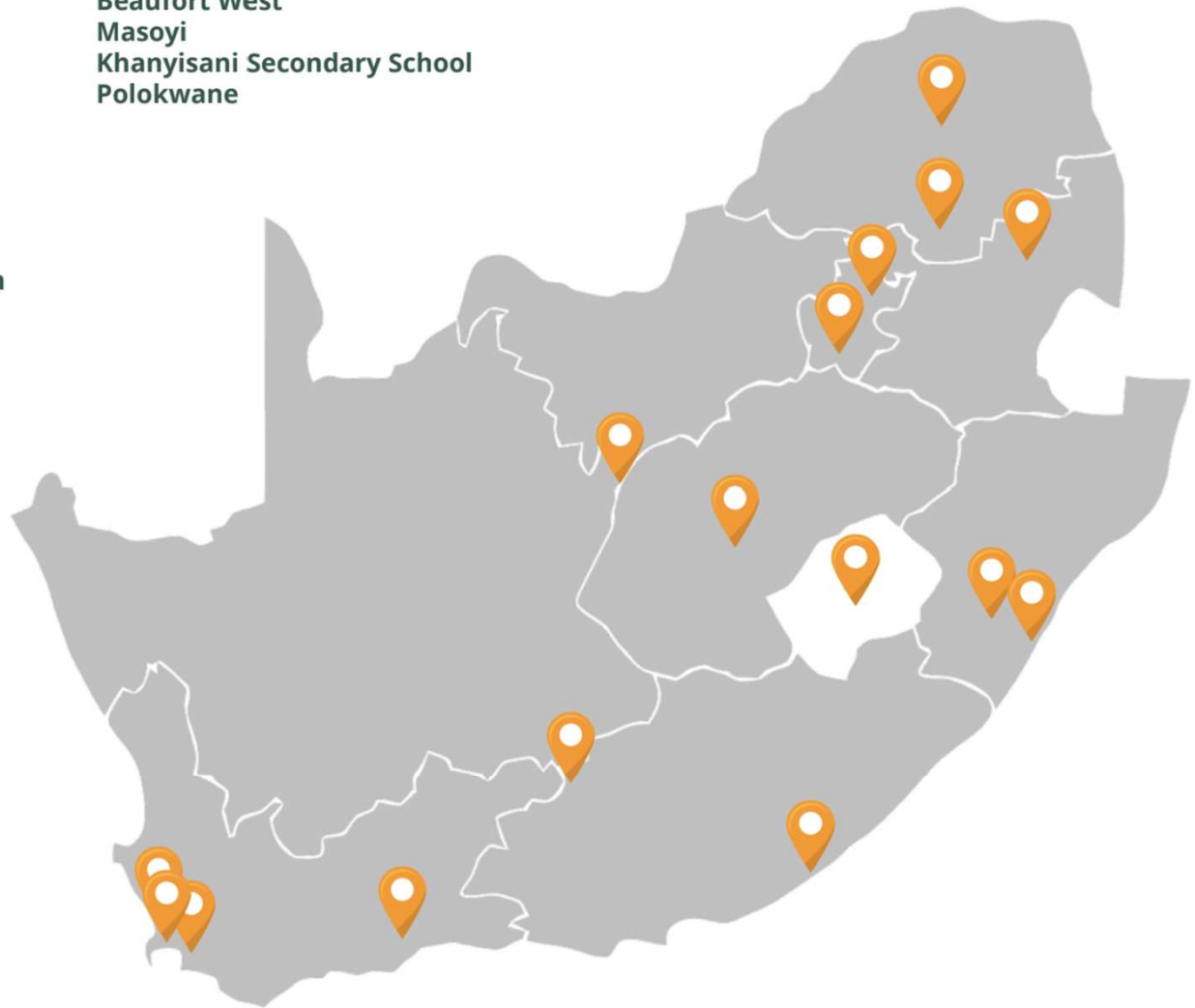
Constructed 39 Pop-Up greenhouses at 9 community hubs nationwide



Set-up 9 Community Farming Hubs

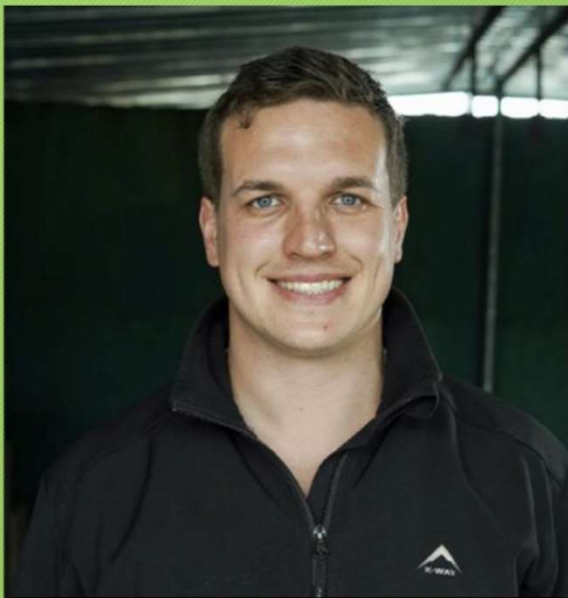
Bloemfontein
Barberton
Durban
Hammarisdale
Philippi
Kimberley
Midrand
Riversdale
Groblersdal
Stikland
Mitchells Plain
East London
Lesotho

Sharpeville Police Station
Beaufort West
Masoyi
Khanyisani Secondary School
Polokwane



FLP HIGHLIGHTS





**B Com (Ind. Psychology) (NWU)
Buss. & Proj. Management Diplomas**

Passionate, system-challenging
“Green” Entrepreneur.

Louis-Gillis Janse van Rensburg
Fresh Life Produce: Operations

Rensie van Rensburg
REEDiSA: Research and
Development



Re-“fired” development
scientist (25 years at CSIR)

Passionate about Technology
and People.



**HED & Advanced Remedial
Teaching Diplomas**
(27 years experience)

Passionate about People.

Helene van Rensburg
REEDiSA: Human Capital
Development

The Core Team

Our Wish...

Is to give every single food insecure household the **opportunity to grow** their own food and evolve into **self sufficient households and communities** that contribute to the socio-economic development of our country

...join the movement!



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FRESH LIFE PRODUCE



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Questions

Robust Tunnel Construction

Victor Roestorff
(Green Sprouts)

Zelpy 1240 Pty Ltd



- In existence for more than 20 years
- Specialists in Roofing, Hothouses, Greenhouses, Fodder Systems and more
- Patented Machine and Process for Poly-ethylene sheets(Thermosheets)
- Sheets are used in Fodder production systems, Hothouses etc



Hydroponics and Hothouses



The Challenge:

The Solution:



Thermosheet Tunnel Construction

- Tunnels are constructed using a patented thermosheet polyethelyne IBR sheet
- Microscopic bubbles are inserted into the plastic to create a light diffusion effect
- Galvanized steel poles are used for the framework
- Fasteners all SS with bonded galvanized washers

Estimated Costs and Construction Time

- 6m x 3m x 3m - R 58000 incl - 3 days
- 8m x 3m x 3.4m - R 64000 incl - 3 days
- 10m x 3m x 3m - R 70 000 incl - 3 day
- 8m x 6m x 3.4m - R 85000 incl - 3 days
- 30m x 10m x 4m - R 300 000 incl - 12 days

Our clients include:



Semi Commercial Vegetable farmers



Small Scale Aquaponic Farmers



Rotary School Food Programs



Traditional Council of
SA

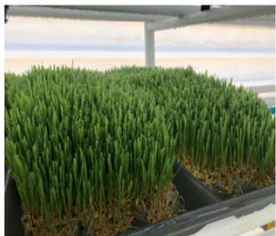


Commercial Aquaponic
Farmers





Greensprouts Solutions



Questions?

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Mobile: 061 983 1872

victor@greensprouts.co.za

www.greensprouts.co.za

DIY Tunnel Construction

Bevan Thomas

(Cape

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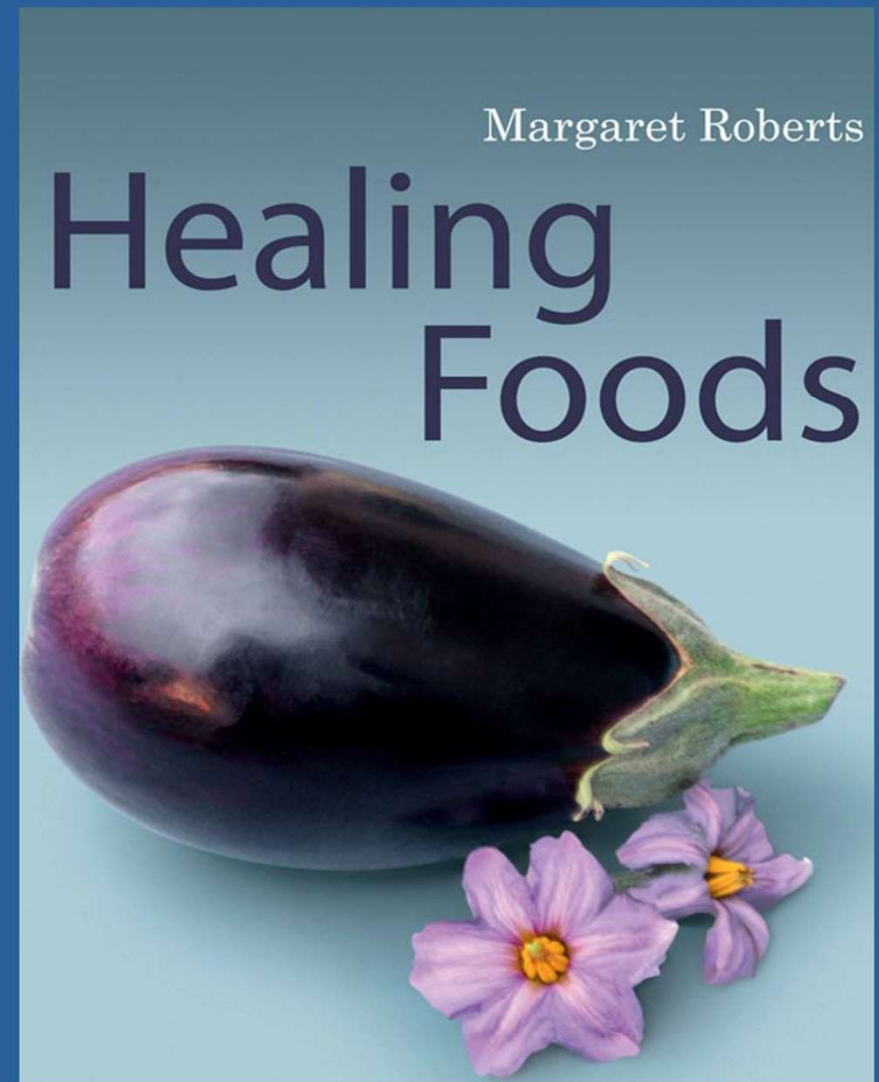
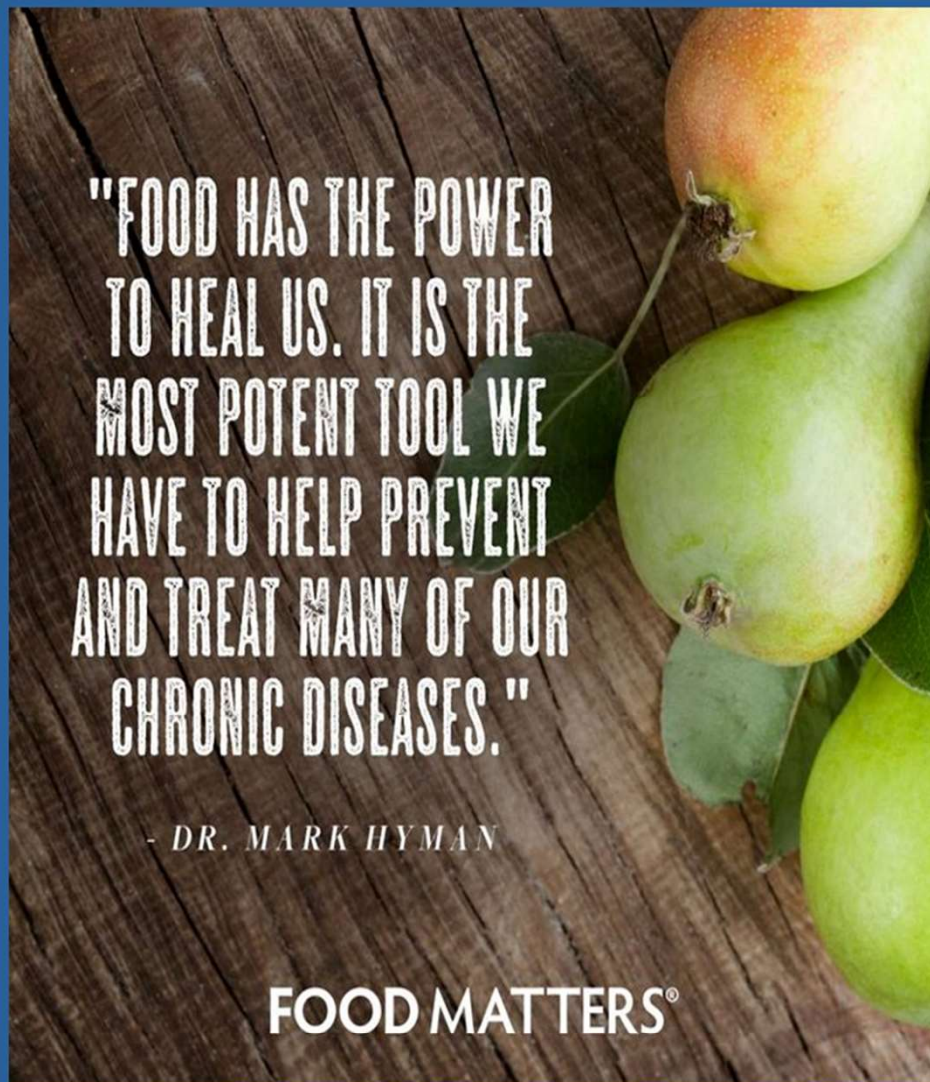
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Gardening Tips

Michelle Nel
(HSRC)

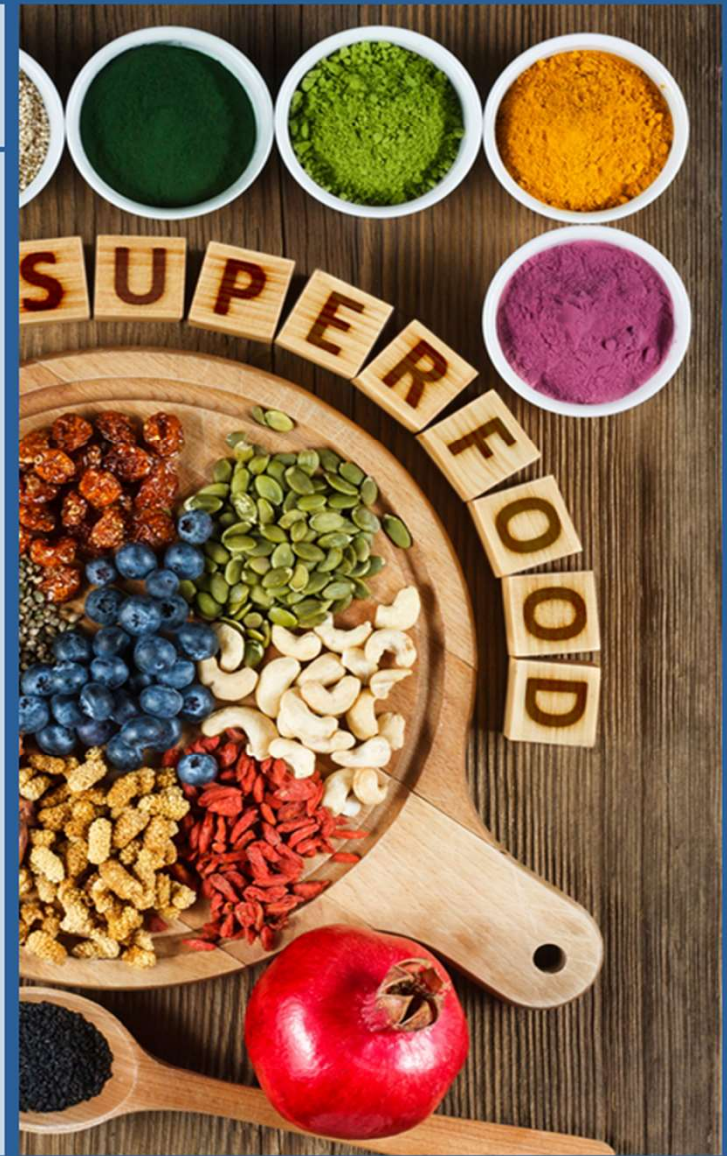
Gardening Tips



Gardening Tips

My Top Tips:

- The Fresher the Better
- Rule of 1/3rds
Fresh, Grains, Other
(Animal products or processed)
- Every Color in Every Meal
- Water, Water, Water



Gardening Tips

Food Plant	Major Nutrients	Main Benefits
Blueberry	Vitamins A, B, C & E, beta-carotene, calcium, magnesium, phosphorus, <u>anthocyanosides</u> .	Excellent for diarrhea, urinary tract infections, poor circulation, atherosclerosis, varicose veins, hemorrhoids, eye degeneration
Broccoli	Vitamins A, C, B6, E & K, folic Acid, calcium, magnesium, potassium, phosphorus, lutein	Prevents & Treats Cancers: Breast, colon, lung, stomach, prostate. Fights irradiation; protects smokers, prevents age related illnesses, eye degeneration, toxemia, high blood pressure, obesity, constipation, kidney ailments

Gardening Tips

Food Plant	Major Nutrients	Main Benefits
Beans	Vitamins A, B, C & E, folic acid, calcium, phosphorus, magnesium, potassium, iron, amino acids, protein, dietary fiber, carbohydrates	An important survival food, highly nutritious, both the leaves and the seed (beans) can be eaten. Acts as a tonic for the entire system, energy booster, builds muscle tone, stamina, strength and endurance, treats TB, malnutrition, emaciation, anemia; strengthens the veins, smooths hemorrhoids, lowers high cholesterol, boosts immune system.

Gardening Tips

Food Plant	Major Nutrients	Main Benefits
Fennel	Vitamins C, A & D, folic acid, potassium, iron, magnesium, manganese, phosphorus, dietary fiber.	Roots, leaves and seeds – all very valuable for the whole body. Excellent diuretic, has anti-cancer benefits, anti-inflammatory scrub to clear toxins from the skin, treats heart burn, respiratory ailments, constipation. Phytoestrogens make fennel very useful in menopause treatment and reduced facial hair in women. It is also an excellent slimming aid.

Gardening Tips

Food Plant	Major Nutrients	Main Benefits
Pineapple	Contains Bromelain – an excellent digestive aid. Also contains Sulphur, protein, digestive enzymes which reduce inflammatory conditions. Rich in Vitamins A, C & B6, beta carotene, calcium, iron and phosphorus.	Clears mucus in pneumonia, bronchitis, acute sinusitis, throat infections. Eases arthritis, gout, joint swelling. Rebuilds the body after injury or operation. A protective fruit for the digestive system.

Questions

Closure

Geraldine Nicol