

Rotary District 9350 Food Gardens Webinar

Successful Home & Container Gardening



AGENDA

- 16:55 Silukhanyo School Food Garden
- 17: 00 Welcome – Anton Lubbe
- 17:01 Successful Home & Container Gardening – Wolfgang Schenck
- 17:50 Questions
- 17:52 Gardening Tips - Michelle Nel (RC Helderberg Sunrise)
- 17:59 Closure – Geraldine Nicol
- 18:00 End of Webinar



Successful Home & Container Gardening

**Wolfgang Schenck
RC Klein Windhoek Valley**



Successful Container & Home Gardening

There's Place in the smallest Space

Growing vegetables in containers

- has no size restrictions
- a balcony is good too
- can be done indoors

Has additional advantages

- needs little soil & water
- uses containers from
 - upcycling
 - the dumpsite



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What grows in containers

On the last slide there are links to:

→ what grows in containers and how large must the pots be

→ what to plant this month (with info on companion planting)

→ planting in moonphases (if you believe in it or not – try it and judge then)



**and all
HERBS**



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Soil for Containers

Do not use soil from the garden! Its too heavy.
Plants in containers need
→ best possible nutrients,
→ aeration & drainage
If garden soil is all you got
→ got compost (humus)?
→→ mix that in
Humus is a fantastic material
→ plenty of nutrients
→ loosens the media (soil).



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Start small

Start small with

→ plastic cups from dairy product containers

→ any type of tin cans

MOST IMPORTANT

→ make a small hole in the bottom of every container to avoid water log



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Go medium

While cans & tins have space anywhere, these need a bit more:

- any type of 5ltr or more plastic cans
- any type of PET bottles

IMPORTANT

- place them where they cannot fall over



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Go high with medium

Vertical Garden:

It needs a bit of space but not as much as a typical garden:

→ build a rack or frame of any material available

→→ wooden planks

→→ wooden poles

→→ strong bamboo or cane

Attach the PET bottles in rows above each other



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Even better: Vertical Garden with Concrete Mesh



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If you tend to forget watering ...

Use 2ltr PET bottles

→ cut them in half so that the cap reaches the bottom of bottle when flipped upside down

→ make a hole in the cap

→ fill soil and plant

→ fill with water until bottle neck is in the water

IDEAL FOR

→ herbs & leafy salads

AND ... INDOORS



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... for the small garden

You have a small garden & maybe bad soil?

How about bags of all types and sizes

→ hessian bags

[farmers have loads of them]

→ strong paper bags

[i.e. baking flower bags]

→ plastic (shopping) bags

[or any other plastic bag not recycled]

All of these work well!

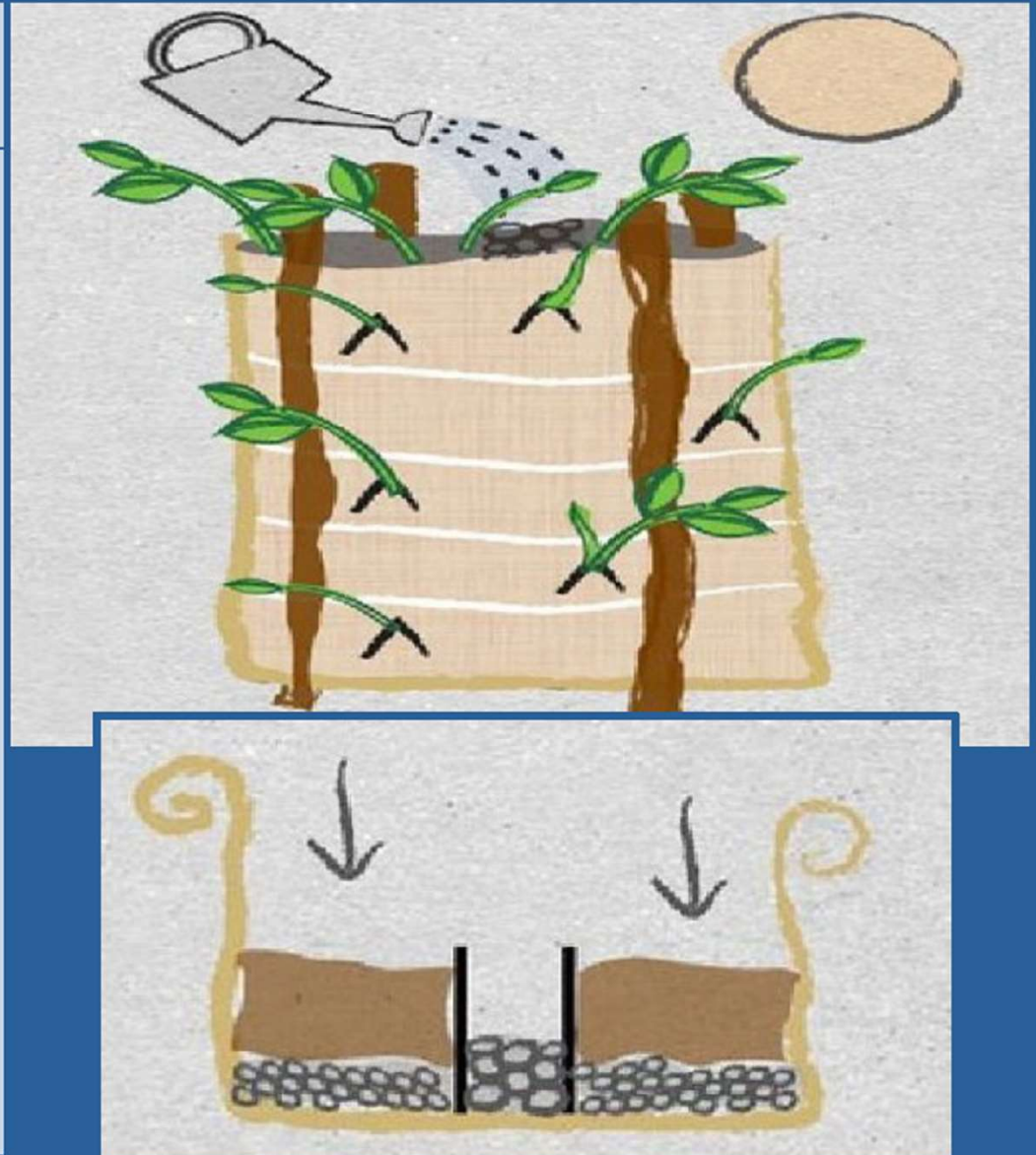


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How to make...

... a bag garden from large bags ... you need

- a piece of drainage pipe
- some coarse gravel or stones
- soil suitable for containers
- put the drainage pipe in the middle
- fill a layer of gravel
- fill soil
- pull out pipe
- ALWAYS water in the middle



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More for bad soil

You have the garden but the soil is 'useless'?

How about getting any kind of container from the dumpsite?

→ toilet pots, wash basins

→ old tyres [line these with black bags to avoid water loss, make small hole in it]

→ bath tubs, washing machines, or any other

→ bottles mentioned above

All of these work well!



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Specific Container Uses

We all know the problem with tomatoes, they grow high and then break when the tomatoes are getting nice and big. Or they lie flat on the ground get mushy real fast.

Solution:

→ hang them!

→ and trim them.

(I have not tried this yet, but will next time around)



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Specific Container Uses

Another tomato solution:
→ up side down!

And you can use any type of container that you can hang up.

(I have not tried this either, but will next time around)



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Specific Container Uses

The watermelon or pumpkin vertical garden

→ in large pots!

→ and again: concrete mesh as support structure

Mint needs a moist soil at all times

Solution:

→ another use for a PET bottle!



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More on tyres

Growing potatoes:

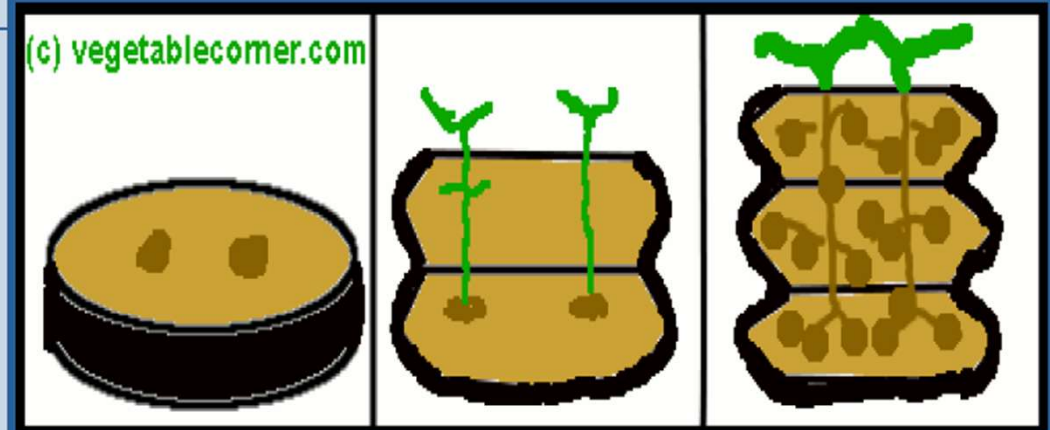
→ plant your seed potatoes in first tyre

→ as the green comes out, add another tyre and soil

→ to harvest simply lift off one tyre after the other

OR

make your green tyre fence



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More on tyres

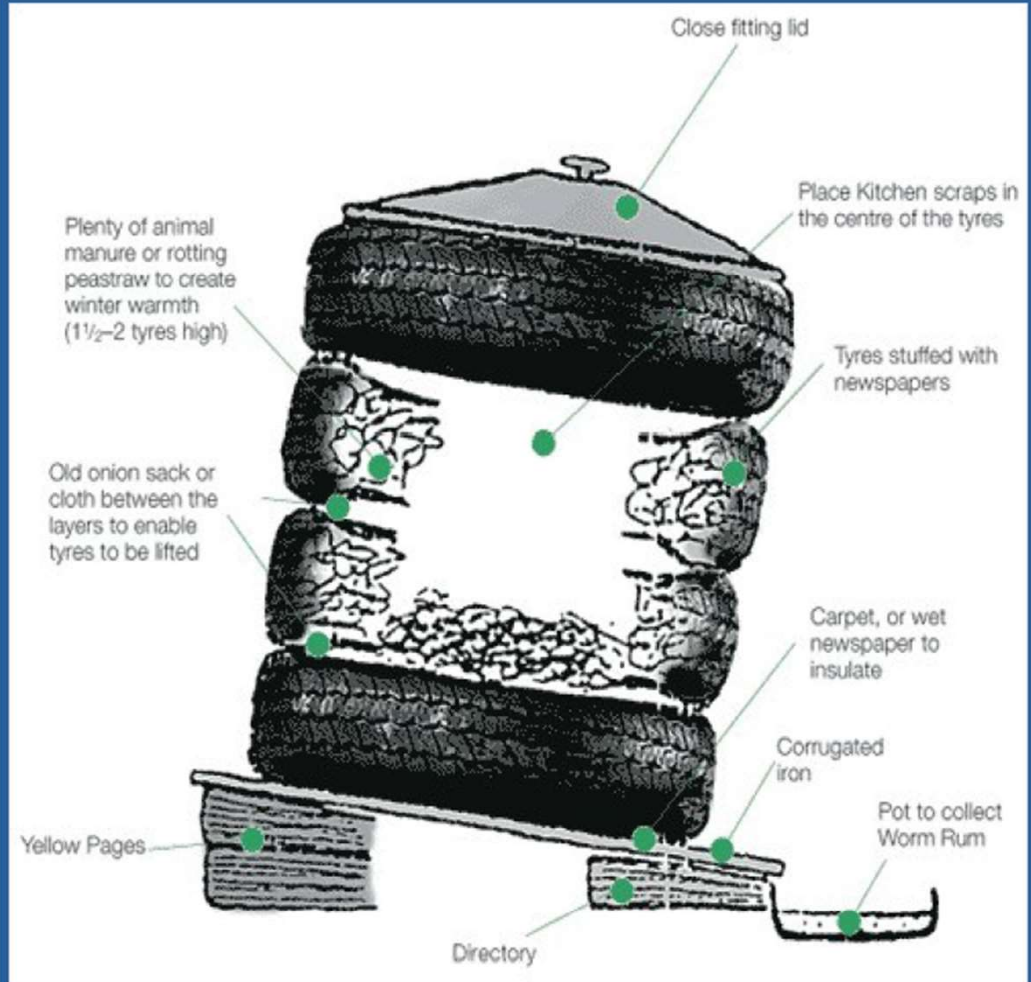
The best nature's gardeners
→ worms!

→ for fertiliser

→ for natural pesticide

Set up your own worm farm

you can also
get fancy
commercial
setups



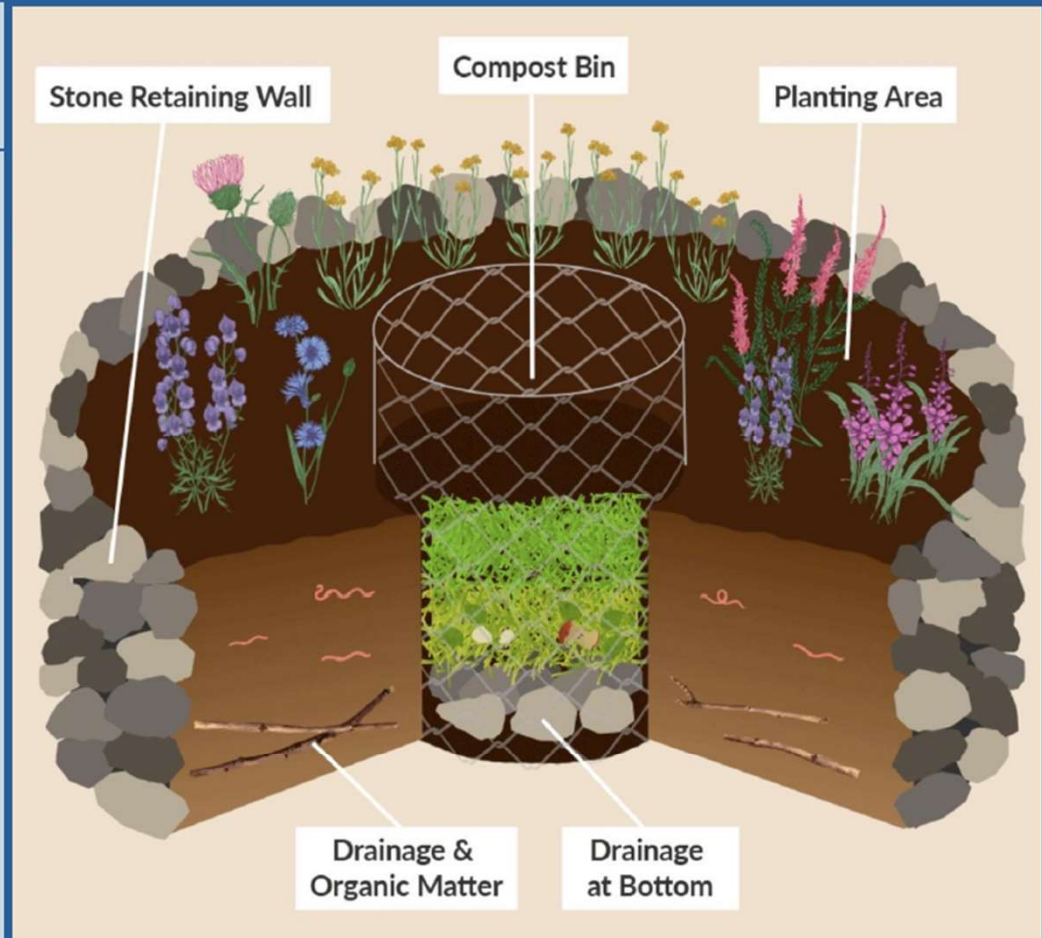
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African Keyhole Garden

Ideal for hot climates, retain moisture & supply nutrients

Building material:

- stones, bricks, clay or palette wood (like ours)
- the compost bin can be chicken wire or wood poles (droppers) or a combination of both
- for sandy soils a plastic lining is advisable
- layer soil build-up



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More on Keyhole Garden

How does it work?

→ in moderate climates only water the compost bin, plants get moisture and fertiliser

→ for dry climates full watering in needed, including compost bin

→ put plants that need a lot of fertiliser to the middle

top pic: my garden in spring

bottom pic: same today

→ netting is bird protection



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And finally something on how it all starts

Sowing your seeds randomly is not effective as

→ you use a lot of water without knowing if a seedling comes SO...

...use egg boxes OR...

...use egg shells in egg boxes

→ makes transplanting easy

→ crush the egg shells in the new container [shells work as fertilizer]



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And finally something on how it all starts

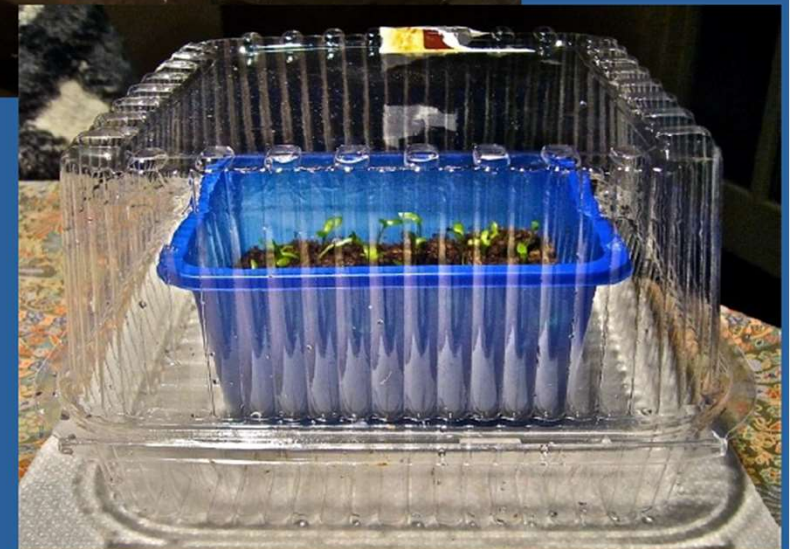
My problem: these small egg boxes dry out really fast. And then the seedlings are dead!

Solution:

Cover them

→ insert in a plastic bag

→ use transparent PET boxes as 'mini' green houses



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About Greenhouses from mini to maxi (no mega)

Climate conditions make a gardeners life difficult. It's
→ too hot, too cold, too wet,
too windy and then ... birds.

Solution:

→ green houses of all kinds
made of

- CD boxes
- PVC pipes and plastic sheeting, even with spray irrigation



Mega-Crafty



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About Greenhouses from mini to maxi (no mega)

Often a cover is sufficient

Solution:

→ old windows



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About Greenhouses from mini to maxi (no mega)

If a cover is not sufficient

Solution:

- close the sides and
- PVC sheeting

(just make sure to add hinges to one side for access)



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About Greenhouses

This one solves the access issue

Solution:

→ plastic sheeting foldable canopy

(for the frames use 12mm copper piping)

(instead of hinges use U-shape aluminium profile as guide)



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About Greenhouses from mini to maxi (no mega)

If you want to go 'maxi' and do some real upcycling

Solution:

→ the PET bottle greenhouse



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Problem with slugs / snails? Make your own trap!
Fill the bottle with beer as shown ↓

Sorry!
no eco
friendly
tips
against
moles
and
mice



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Water is Precious

When I started to monitor my waterconsumption in detail I realised that

→ **80% of water used a month was for the garden!**

[my first 3 mango's cost me N\$/SAR160.00 ea. in water!]



AllPosters



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How to Water Containers

- Containers dry out quickly
 - water up to 2x a day
 - water deeply - plants need water at their roots
 - water till it runs out at the bottom of pot
- MAKE YOUR OWN can
- from a plastic bottle

Bottle too big?
do the same with a 1ltr →



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Hose Pipe + Technics

Use garden hose pipe IF
→ you add a stop-nozzle + a
piece of hose for stem
watering

TIP: put a cut coke bottle in
soil to avoid washout of soil
from water stream

→ add water flow measure to
hose for measuring amount of
water given



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Home Garden Solutions / DEFINETLY → skip the hose pipe, skip sprinklers, skip automatic irrigation, skip flood irrigation!



Exception:
stop tap on
hose pipe



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Not All Need The Same

Not all plants need same amount of water.

- with a can you know how much water you give
- make your own long spout with plastic pipe sealed
- and a hole or 2 in the tip
- long – allows to water at stem



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Not All Need The Same

Not all plants need same amount of water.

Many plants do not like wet leaves

- leads to pest infestation
 - black, white, brown lice
 - woolly lice
 - leaf spiders



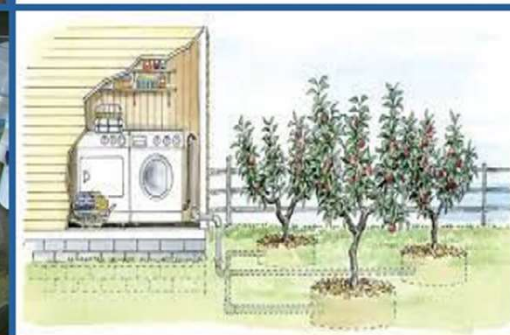
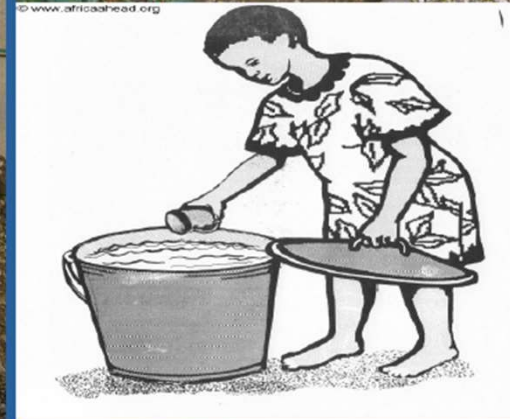
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Select Water Source

Alternative water sources are:

- grey water tank from bathroom (NOT kitchen!)
- rain water collection tank
- catch run-off water when waiting for hot water to come
- store in any container for later
- from washing machine

NOTE: use grey water only for plants where you do not eat the leaves or roots!



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Large Garden Saving

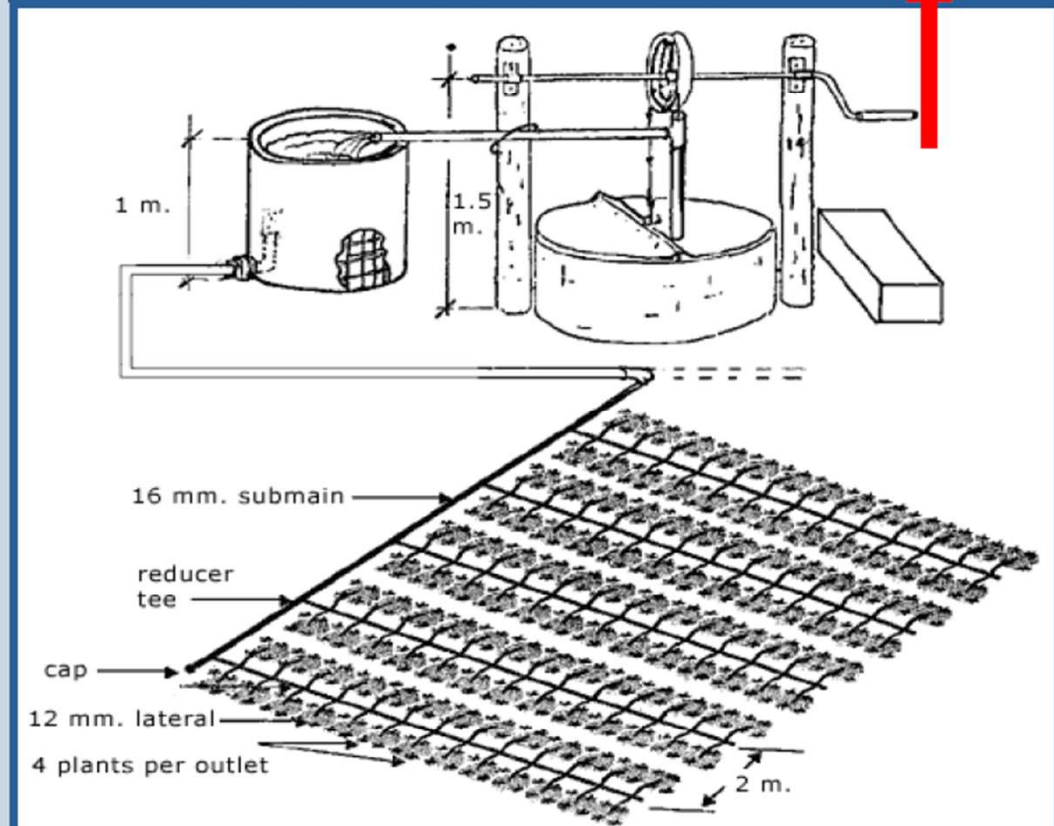
For larger gardens some kind of automation is needed

I call it 'manual automation'

→ full automation would be a drip irrigation system

- problem: drips clog due to lime deposits – regular maintenance required

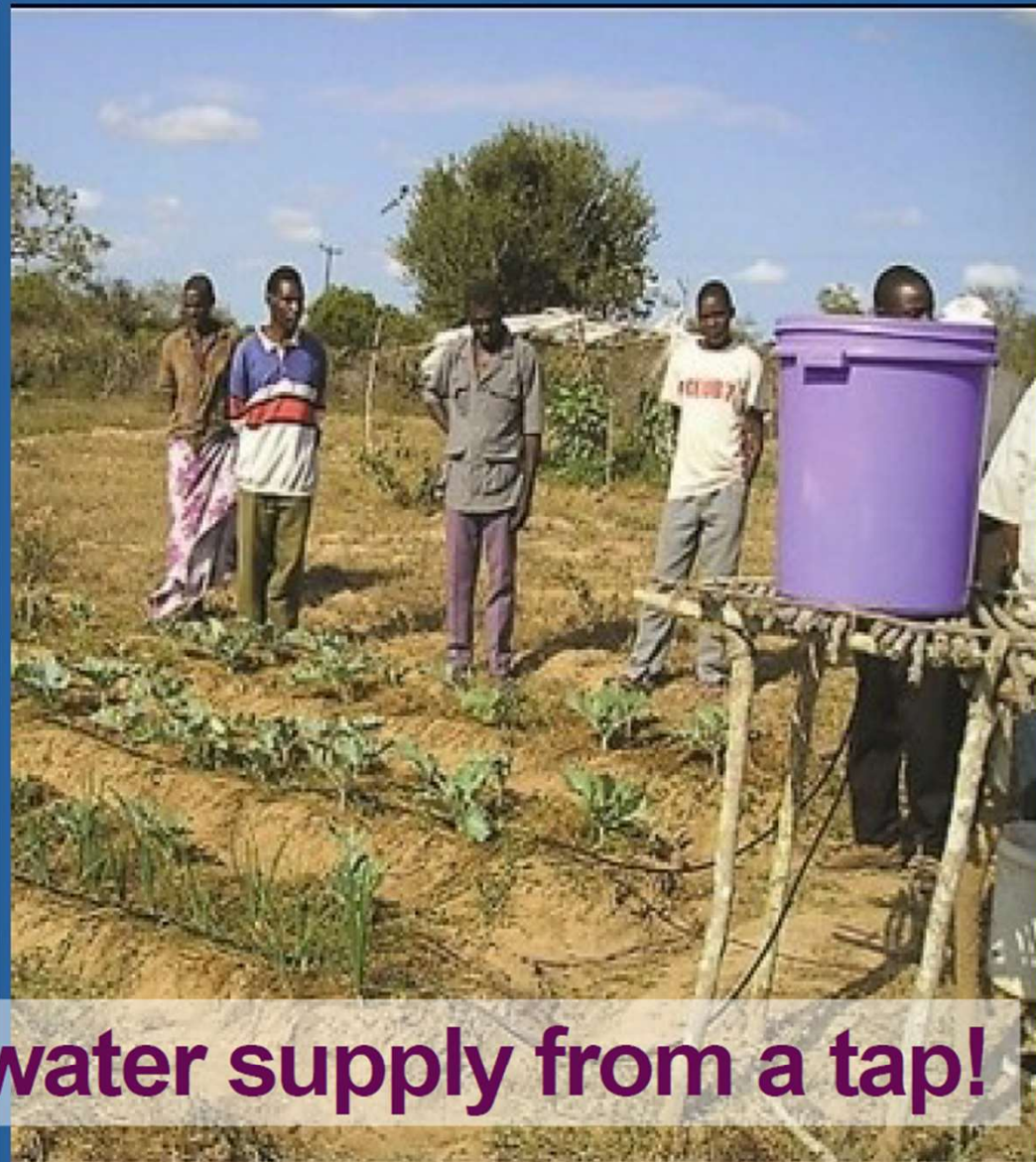
→ the 'African irrigation system' uses only simplest and cheap equipment



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No need for constant water supply from a tap!



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Simple Preparation

What is needed:

- class 3 black pipe 15mm
- T-pieces 15mm
- stop taps plastic
- reducer feeder line to irrigation line 30mm to 15mm

How to?

- cut pieces of black pipe
- and heat one end over fire
- squeeze the soft end to seal
- punch hole in tip with hot wire → ready for T-piece



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Simple Assembly

How to?

- make plant beds (dams) for small watering sections
- lay out pipes, starting at feeder line
- connect all parts and secure connections with binding wire
- add mulch
- add the 'watering bottle'
- ø Test system line by line to check for leakage



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Thank you for your attention

Compiled by Wolfgang
Rotary Club
Klein Windhoek Valley

If you have any questions feel
free to contact me by email:

rcw@nuevas-ideas-namibia.com

For the list of sources please see the next
slide.



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some useful links ...

<https://sharingideas.me/what-vegetables-can-you-grow-in-containers-and-how-large-should-each-container-be/>

<https://www.gardenate.com/zones/South%2BAfrica%2B-%2BSemi-arid>

<https://au.rhythmofnature.net/gardener-calendar-March-2024>

<http://working-worms.com/traditional-worm-farming/>

<https://www.home-dzine.co.za/garden/garden-grow-vegetables-in-plastic-bags.html>

<https://www.almanac.com/abcs-fertilizing-containers>

<https://agriflifeextension.tamu.edu/solutions/container-gardening/>

<https://www.gardeninginsouthafrica.co.za/>

<https://agriflifeextension.tamu.edu/>



Questions



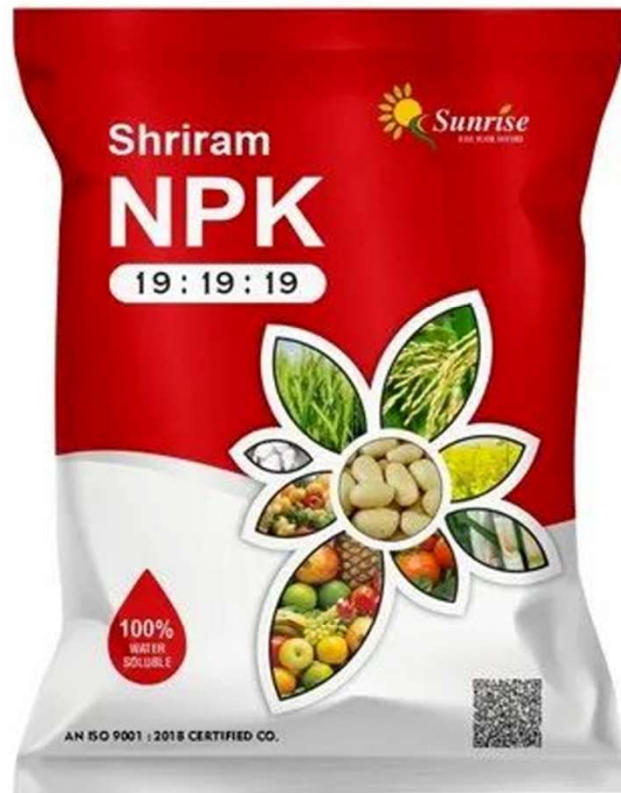
Home Gardening Tips

Michelle Nel

(RC Helderberg Sunrise)

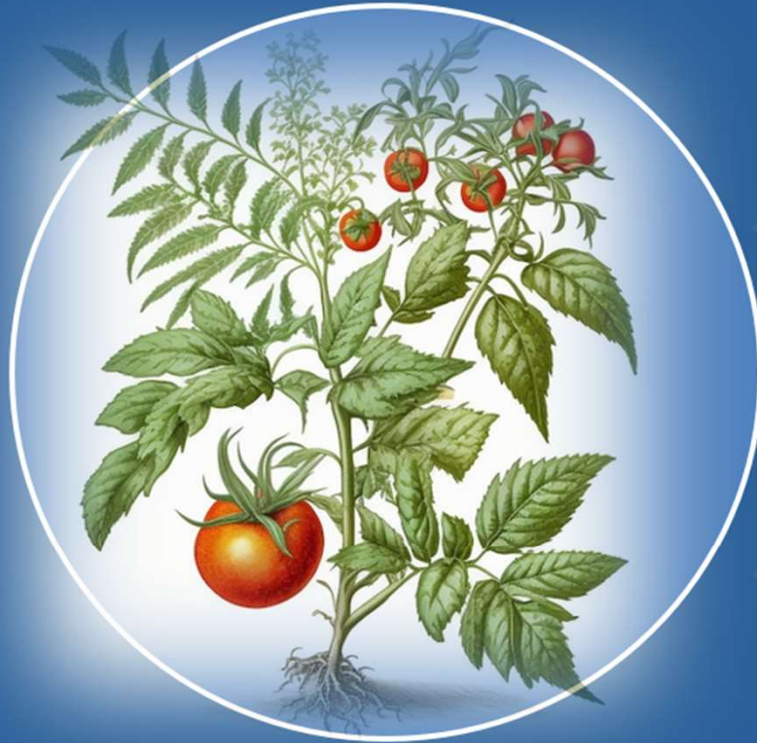


Gardening Tips



Home Made Fertilizer

Gardening Tips



N

- Nitrogen
- *For plant colour & growth*

P

- Phosphorus
- *For fruit & flowers*

K

- Potassium
- *For strong roots*

Gardening Tips

N

• Nitrogen

P

• Phosphorus

K

• Potassium



Questions



Closure

Geraldine Nicol

