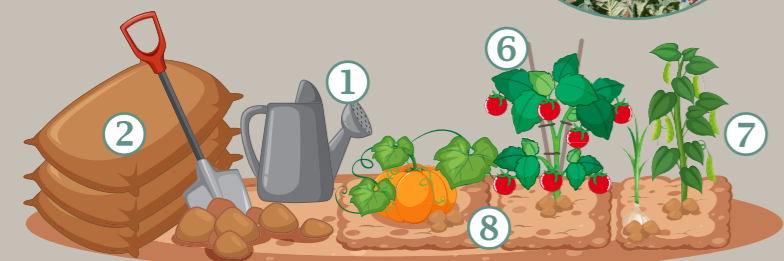


MAINTENANCE

TAKING CARE OF YOUR GARDEN

- 1 WATER** your garden regularly, yet careful to not over-water it. Before watering, check the soil with your finger if it is still moist, or dry.
 - Water early in the morning and/or late afternoon when the sun is going down and not that hot anymore. However, in WINTER only water in the morning after the sun has gone up but NOT IN THE EVENING.
- 2 COMPOST/MANURE:** Add some mature compost/manure to your garden every now and then to keep your soil fertile and healthy.
- 3 WEEDING:** Make sure that every time you water or work in your garden, that you take out the weeds, because they compete with your vegetables for nutrients and water.
- 4 MULCH:** Make sure that you add lots of new mulch again and again, as your old mulch will continue to de-compost and becomes part of your fertile garden soil.
- 5 PEST CONTROL:** You can limit a lot of damage by observing your garden and taking out any pests as soon as they appear among your plants. Only use organic or home-made insecticides (*see Healthy Soil Life*) and only if you must. DO NOT USE CHEMICAL PESTICIDES. They are bad for the health of your soil and your own health since your vegetables take in all these chemicals.
- 6 TRELLISING & CLEANING-UP:** Your vertical plants (like tomatoes, beans, and cucumbers) should grow on the sticks and trellises that you build for them, so that their fruits don't lie on the ground and pests cannot eat them, and they will not get rotten so easily.

Also, make sure to regularly remove old plants that are not productive anymore.
- 7 HARVESTING:** Enjoy reaping the fruits of your work and dedication... yet don't harvest too late, otherwise your vegetables will not taste that nice and will not be as nutritious anymore.
- 8 SUCCESSION PLANTING:** Keep planting out new seeds and seedlings into the spaces that are free, after you have harvested or removed old plants. Do this continuously, and you can grow more and will not waste water where there is nothing growing.
- 9 INVOLVE FAMILY AND NEIGHBOURS:** Get members of your household to join you in gardening, especially children. You can also help your neighbour with their garden and work together with them, so that you can look after each other's gardens when one of you is not home.



PEST CONTROL

- Organic and Home-made Insecticides

PREVENTION IS BETTER THAN CURE

If you have healthy soil and use the 'companion planting method', then you have a good chance of healthy plants that are more resistant to pests. If you check your garden and vegetables on a regular basis for pests, then you can also easily remove them by hand before they spread and become a problem! (Also removing old plants if necessary.)

If you feel you need a pesticide, only use organic home-made solution, such as 'garlic spray'. This will not poison your soil or vegetables which can cause you health problems later.

GARLIC SPRAY FOR FUNGAL DISEASES AND INSECTS:

- Crush ±150g peeled garlic (about 3 whole garlic bulbs).
- Mix with 2 teaspoons of paraffin. Let it stand for 24 hours.
- Dissolve 7 teaspoons of liquid dishwashing soap with 5 liters of water and thoroughly mix in the garlic/paraffin mixture - stand for another 24 hours.
- Strain the mixture well before spraying your plants. Spray your plants once every evening for at least a week.

REMEMBER FOOD SAFETY:

ALWAYS wash your VEG with water before preparing or eating them!



HEALTHY SOIL LIFE

MULCH: Use organic matter like dry grass or even cardboard boxes and newspapers (not the glossy ones with too much colour) to cover the soil between plants to **protect the soil from drying out** and from becoming too hot. Your mulch also acts as a compost and is good for the fertility of your soil. Always continue to mulch, again and again once you see your mulch is becoming less with time. Once your seeds have become plants, you can mulch the ground as thick as possible, up to 15-20cm thick.



SOIL LIFE AND FERTILITY:

Good soil is always ALIVE with lots of micro-organisms

These micro-organisms are very small, and they work together with the roots or your plants to feed your plants the foods they need. We have to protect and help them stay healthy and alive by protecting the soil from heat and dryness with mulch.

You can also add compost/mature (= old/dry) from cows, goats, sheep, donkeys, horses and even chicken manure (careful, chicken manure is very strong. It must be old so that it does not hurt and burn your plants). Sprinkle the compost/manure on the soil between your plants and make sure you mulch afterwards, so your compost/manure is protected and does not dry out.



Once your garden beds are established, you should not turn or open the soil again at any time. Leaving your soil 'undisturbed' helps build optimal soil life and fertility. Against popular beliefs and practices, turning or tilling of soil is actually not good.



COMPOSTING: Using a **pit-compost** is an easy way to make your organic waste useful and help your soil become much more fertile. More details and tips: www.nafsan.org/compost

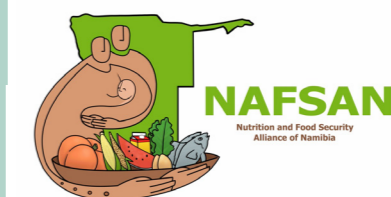


STEP-BY-STEP GUIDE

Your Own Garden, the Simple Way!



For more information and videos
www.nafsan.org/gardening



A FIND THE RIGHT SPOT

WHERE TO POSITION YOUR GARDEN? Walk around, look, and observe with focus on Water, Sun, Wind, and Security

1 SPACES - What spaces do you have available? Where is the best place for your garden?

- You can grow vegetables directly in the soil or in containers such as bottles or use tires, or vertical with pallets.



2 WATER - Can you catch water into your garden from any runoff from the soil/slope around your shack or from your roof or your outdoor washing area/shower?



3 SUN - Look at the sun's position and its path around your space:

- East = best position for your garden (morning sun).
- North = garden gets winter sun, also good for your garden.
- South = garden gets a lot of shade in winter, not ideal.
- West = garden gets hot afternoon sun, not ideal - yet you can create some shade that protects your garden from the strong sun.



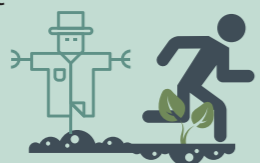
4 WINDS - Are there strong winds coming from one direction?

- Use natural wind-protection or create a wind breaker to protect your garden.



5 SECURITY - Will your garden be secured enough?

- What threats are there, such as people walking, dogs, chicken, etc? And will you be able to easily access your garden? If you have quick and easy access to your garden, you will enjoy growing food and are more likely to have success.



B PREPARE & DESIGN

LAYING THE FOUNDATION AND MAKING A PLAN...

➤ **CHECK THAT YOU HAVE ALL THE TOOLS YOU NEED: PICK, SHOVEL OR SPADE AND A RAKE**

... You don't have to have 'proper' gardening tools but can use your own home-made tools out of useful objects that are lying around, such as old iron bars.



1 Size of your vegetable beds:

Each bed should not be wider than 60-70cm (arm's length). ➤ This way you can reach all your plants easily from only one side. If you are able to access your vegetable bed from both sides, then it can be up to 1.20m wide (double reach bed).



2 Mark the position and size of your (future) garden beds and draw its boundaries in the sand.



3 Loosen the soil and remove rocks - at least a good hand deep of loose soil, 40cm deep.



4 Create an edge or border for your garden bed, hereby re-using the rocks you removed previously.



5 Level out the soil so that water doesn't flow off on one side, or gathers in one part of the bed. All plants should get equal amounts of water for them to grow best.



6 Water the bed first to check your levelling and to water the ground before seeding.



CAREFUL! Once you finished your vegetable bed, DO NOT step into your bed, as this will compact the soil and make it more difficult for your future vegetables to grow.

CAREFUL! Use a 'soft' watering method = a watering can, or make small holes at the bottom of a bottle or tin, so that water drips gently and 'softly' onto the ground and into the soil. This way no vegetables get hurt (holes can damage the roots) and no soil gets flushed away. Always add water onto the soil around the plants and not onto the plants themselves, as this can spread plant diseases and/or damage the plants.



7 Use **COMPANION PLANTING**, a natural way of growing vegetables and other plants together in the same bed, so they support each other to grow better and healthier. It also keeps pest away, for example by mixing herbs, garlic or flowers among your vegetables.

TYPICAL COMBINATIONS ARE:

Onion +Carrot +Cabbage +Beetroot
OR
Beetroot +Spinach +Onion

Peppers +Spinach +Carrots
OR
Tomatoes +Carrots +Onions
+Beans

Kale +Beetroot +Onions +Spinach
OR
Cabbage +Beetroot +Onions

Herbs +Garlic +Flowers



8 How will you use your space and plant your veg/herbs?

➤ If you have a **SINGLE REACH BED** then position the vertical plants (beans, tomatoes, cucumber, etc.) at the very back, the larger plants (i.e. peppers, chilies, kale) in the middle, and at the front you plant smaller vegetables (onion, carrots, beetroot, etc.)

➤ If you have a **DOUBLE REACH BED**, then you should put the largest vegetables (beans, tomatoes, peppers, kale, etc.) in the middle of the bed and the smaller vegetables on either side. In this way, you can access all your smaller vegetables without the larger vegetables obstructing your hands.

➤ **REMEMBER:** build a trellis (or sticks) for your tomatoes, that they don't hang on the ground, where they can rot or pests can get to them.

Here an **EXAMPLE** of a double reach bed, being 3m long x 1.20m wide:

O = ONIONS. 2-3 ROWS OF ONIONS

Onions are a natural pest repellent, and you can grow them around the border of your bed to discourage pests from entering your bed.

C = CARROTS. 2-3 ROWS OF CARROTS

Carrots go well with onions. They are small and will not impede you to reach the larger vegetables in the middle of the bed.

S = SPINACH. 1-2 ROWS OF SPINACH

Here you could also add a row of beetroot if you like (Tip: Beetroot leaves are also edible, you can harvest and prepare them like spinach!)

P = PEPPERS. 1 ROW OF PEPPERS ABOUT 50 CM APART

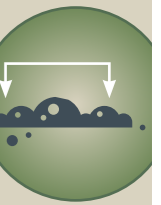
You could also grow tomatoes here, but then you need to build a trellis in the middle of the bed to keep the tomatoes away from the ground, to grow healthier and become more productive plants (vertical space)!



C PLANT YOUR SEEDS

LET'S GET IT STARTED!

1 Mark the positions for your seeds. In this way you see if you overlooked some space or made any miscalculation. Information on seed packets show you how much space your seeds need.



2 Seed out - Make sure you plant the seeds in the right depth, not too deep. Very small seeds (like lettuce) can be sown on the surface, and you then just sprinkle some soil over it.



3 Add a bit of compost/manure onto your vegetable bed. (See *Healthy Soil Life*)



4 Mulch lightly, for example with cut off dry grass.

When your seeds are still in the ground, only use a little bit of mulch. Once your seeds have grown into plants, you can use mulch more generously.

At this point, **start building your trellis** (sticks to be put into the ground) to help your vertical plants, such as tomatoes, beans and cucumbers grow along these sticks.



5 For security, you can use cut up thorn bush and put it in your vegetable beds to keep chicken, dogs, and cats away from digging out your vegetables. Try and use whatever materials are available and appropriate to **protect your garden from animals and the sun**.



Shade nets (if you have) help protect your plants from sun and wind. Yet, do not create too much shade as your plants need sunshine to grow healthily - observe how your plants grow according to where you have planted them and how much sun/shade they get, and respond accordingly.

