



What You Need to Know About Your Garden

How to Install a Garden

- To start we will need **forks** to aerate the soil below the raised beds. This will allow the plant roots to penetrate the lower soil for optimum growth. This will also allow oxygen into the soil and bring earthworms and other beneficial insects up into the raised bed.
- Add cardboard on top of this soil and water it. This will hold water and create a moist environment while creating a buffer to stop weeds from growing in the bed.
- **Add SOIL!** Soil is key! Soil is the very foundation of life, it is where all life comes from. We eat animals that eat plants to survive, without them there would be very little, if anything for humans to exist on.
 - Within the soil there is a whole community of micro-organisms, even more than there are on top the land.
 - This community includes; nematodes, protozoa, worms, etc
 - These insects and animals love moisture, they live lower down in the soil substrate and are attracted to the top only where there is moisture. If the soil is too dry they don't like it.
 - These insects are important because they bring needed nutrients to the plants that make them healthy and allow them to thrive.

Soil building & Amendments

- In our Slow Food gardens, we use only **organic** principles. What does that mean?
 - That means that we only use non-chemical inputs such as;
 - Natural fertilizers (manures)



- Natural soil amendments such as compost
 - Natural pesticides (such as neem) made from plants and natural pest deterrent techniques such as flowers and other beneficials
 - Mono-cropping with one plant type can be dangerous if a pest comes around, they will eat all of what they like. We use **polyculture** in organic farming where a variety of plants are planted in one area to not only beautify and enhance the selection of plants but also to detract pests.
- We first **build** our soil by adding a soil enhancer, this is usually manure of some kind. There are compost mixes available that contain all these materials already. If you don't have that you can also use factory mud; this grows seeds very well because of its bacteria and fungi texture, lightness and nutrient content. Chicken manure (pellets, to reduce smell) is a good nutrient booster that can be added as well.

Seed Starting & Seedling Planting

- Refer to the plant layout of each plant's location and be able to justify the location choice.
- Seedlings should be planted so all roots and part of stem are buried in the soil.
- Seeds, depending on the variety, should be planted at least $\frac{1}{2}$ to **1 inch** below the soil. Refer to the seed package for specific details on this.
- Seedlings are very fragile and do not like to be planted in the hottest part of the day. Best to plant them in the **late afternoon** so that they are given a good amount of time (approx. 12 hours) to adjust.
- The soil around the seeds must remain **moist** in order for germination to occur correctly.
- We may need to erect some shade materials in order to make sure that they are protected from pests as well as the hottest part of the day.
- If you are growing peas/beans, a trellis is a great option to give the plants a structure to hold onto.



Daily Maintenance

- Seedlings/seeds must be watered **twice a day** when they are first starting out so that they have enough water. The best times to water are **very early in the morning** before the sun rise or **late in the evening**. This will allow the plants to have the maximum uptake of water. When we water at the hottest parts of the day most of it evaporates and may cause some damage if it lands on the leaves.
- When watering ensure you **water the soil** and not the plants. Allow the water to percolate deep into the soil by allowing slow watering. If soil is only watered superficially (only on the top layer) the roots of the plants will grow horizontally and not down into the soil. This will make them less hardy.
- Once the plants become established (approx. 1 month after planting) watering can be reduced to once per day. Your plants will tell you how often they need to be watered. If they are drooping by the end of the day and they have already been watered, they will need to be watered again.
- When checking for pests make sure that everything on the plant is still there, if something is not inspect to see if you can figure out what ate it. Take a photo and coordinate with your organic grower and/or Slow Food Barbados representative who will help you identify pests and give you tips on how to deal with them.

Composting

As a part of natural soil building we suggest composting as a way to improve soil quality. Please refer to the **Garden Guide** for more information on this.

MANAGE YOUR GARDEN THE ORGANIC WAY

1. MULCHING.

- This means covering your soil with grasses, leaves or any natural material that can reduce the Sun's heat, traps moisture and the washing away or flooding of soil by heavy rain.



- Any amount of mulch is better than none, but if you can get 2 inches of mulch cover you should have enough to prevent weeds from growing.

2. CROP ROTATION.

- This means planting a variety of crops at different times throughout the year. Just as children are a part of a family, so are different crops and each family uses similar parts of the soil to grow well. They also attract similar pests! By changing crops you do not take all the same nutrients from the soil too quickly and pests do not get a chance to grow too comfortable.
- Learn about the various crop families and change your crop types at least **twice per year**. This allows the soil to grow healthier crops and keeps the amount of pests very low. Some crops can be grown that will benefit the next set of plantings.

3. KEEPING PLANTS HEALTHY

- Organic growing requires healthy soil and a mixture of other goodness to thrive. Like humans, plants need some level of sunlight, water, oxygen, adequate space, and a well-rounded, natural diet to thrive and grow healthily.
- Different pests not only eat plants or suck the life out of them but also cause plants to “stress”. Too much or too little sun, water, too little space and too much food/nutrients can also be stressful to plants.
- Soil that contains well composted, natural amendments, allows crops to grow more happily as their roots can expand in a loose, well-formed and balanced environment. The balanced soil allows plants to take just how much benefits they need from the soil, when they need it.
- Plants, like humans respond well to care and attention, so pull weeds from around the crops. Drop your weeds into a

compost heap and when they have dried out, add them back to the soil as mulch



4. ORGANIC PEST CONTROL

- If we can keep our plants healthy and stress free, they will be more resistant to pests. If we use crop rotation as a second strategy, we will also reduce pest impact. It is important to inspect your crops frequently and to identify pests or disease damage before the problem is too far gone.
- It is also important to recognise and encourage natural insects that will eat the pests. The use of sprays, even natural organic sprays is the 3rd and most often last option.

SOME OF THE ORGANIC GARDEN INPUTS YOU CAN USE TO:

Fertilisers

- Composted animal manures (if composted for 4 months). Manure can be left in an area and covered with galvanized for a similar period. Can also be used as liquid feeds.
- Household/garden compost.
- Green manures, legumes planted as part of a rotation.
- Seaweed as a soil amendment and as liquid tea.
- Formulas made from fish waste as liquid feeds.
- Effective Microorganisms, epsom salts; acts as microbe activators and nutrient facilitators in the soil.

Organic Pest Controls

- Neem teas or oil (teas can be made from soaking neem tree trimmings or berries for 7 days).
- Garlic teas as repellents.
- Small amounts of washing up liquid and water (1 teaspoon liquid per gallon water).
- Yellow sticky fly traps (Whitefly) Blue traps (Thrips) to both monitor and capture.
- Pick off pests and observe and protect beneficials such as ladybugs, spiders, even birds.



- Sweet marjoram plants for ants and other plants as repellent

