OPERATING THE AEROBIN HOME COMPOSTER

OBJECTIVE

To enable Aerobin operators to Compost Household Kitchen and Garden organics, producing healthy organic Compost in accordance with Aerobin operating parameters provided.

KEY PERFORMANCE INDICATORS

- The Compost or Humus harvested from the Aerobin will be both earthy in appearance & texture and as well moist.
- As a bi-product of the composting process, liquid nutrient (a rich natural fertiliser) can be obtained, referred to as either Leachate or Compost Tea.
- The decomposition of the Biomass materials will occur over an 8-12-week cycle.
  Nb: 'Biomass' is all of the material that has been loaded into the Aerobin regardless of the decomposition that has taken place.
- The Aerobin operates on a first in – first out basis and there is no need for manual intervention (turning or agitating) of the Biomass once it has been loaded into the Aerobin.
- The volume reduction of the Biomass ingredients to its final form as Compost or Humus will be approximately 2/3rds – so 100 kilograms of ingredients will return approximately 30 kilograms of Compost.
- The Biomass within the Aerobin will be hot and moist. Condensation will be seen forming on the internal Walls and Lid of the Aerobin. The Biomass will smell either sweet (earthy) or neutral – odourless.

BENEFITS

- Resources that are traditionally treated as 'waste' can be effectively recycled and used to benefit gardens, vegetable gardens, pot plants and improve the health of soils and lower the evaporation of water from garden beds – all of which will improve the return from growing efforts.
- By not sending organic materials to landfill (waste dumps) the damage to the environment of our planet will be significantly reduced.

SETTING UP THE AEROBIN

- The assembled Aerobin must be placed on a level, solid foundation. Why? The Aerobin when full of Biomass materials and Compost could be holding 200 kilograms – 200 Litre Aerobin or 400 kilograms – 400 Litre Aerobin. So the Aerobin must stand vertically and stand on a full surface foundation – such as concrete, bricks, pavers, heavy timber – but never on soil or grass surfaces only. It is desirable that the Aerobin sits higher than the surrounding surface – 100 – 200mm (max).
- While the Aerobin is Rodent resistant, it is advisable for the Aerobin to be located where there is people movement and not against structures – fences or buildings.
- The Aerobin can either be placed in a location where it will be exposed to full sun-light or partial sun-light.
- The Aerobin will be assembled in accordance with the assembly instructions provided.

OPERATIONAL PARAMETERS & PERFORMANCE

- The Aerobin will be operated in accordance with recipes using the Aerobin Compost Simulator. How the Aerobin will perform based on the ingredients that are loaded into the Aerobin can be anticipated using the Compost Simulator that can be found on the Aerobin website. The "Composting Simulator" will quite accurately show how the materials chosen will decompose – and if the same materials are loaded into the Aerobin, the simulation results will match the actual results obtained – good or bad. So it is important to ensure that the results obtained using the Compost Simulator fall into the Green bands of the indicator gauges and if they don't change the mix or weight of ingredients until the desired results are obtained. The Compost Simulator can be found on the website at www.aerobin400.com – select a country – then see Info & Resources and from the drop down menu see "Simulate Composting in your Aerobin".
- The ingredients that make up the recipe will be pre-mixed before they are loaded into the Aerobin, avoiding concentrations of any individual ingredients.
- Aerobin relies on the healthy Aerobic decomposition of the biomass materials – as a process the following materials **cannot** be processed in the Aerobin – all Diary Products; Cooked or Processed Food; Raw Meats; Fish; Cardboard carrying heavy ink printing and Pet Feces.
- Garden Organics – particularly pruning's from shrubs, flowering plants and trees, must be mulched or shredded before they are loaded into the Aerobin. These woody materials will take much longer to decompose unless the particle size is significantly reduced. Equally the particle size of Kitchen Organics should be consistent and with both, the smaller and more consistent the particle size the quicker the decomposition and conversion to Compost will be.
- Ingredients such as Kitchen Organics must be fresh when they are being loaded into the Aerobin – should they have either began to go rotten or have become totally rotten then they should never be used. As a rule Kitchen Organics should be collected and loaded into the Aerobin on a daily basis – unless these materials were being stored in a refrigerated environment.
- The activity occurring in the Aerobin should be reviewed from time to time – as a minimum on a fortnightly basis:-
    - Lift the Lid and place your face over the top of the open Aerobin – can you feel heat rising?
    - At the same time smell the rising air – does it smell 'sweet' or earth like or is it odourless/neutral?

      If 'yes' to both then there is a healthy Aerobic decomposition at work within the Biomass – Aerobic composting. If there's either no heat sensed or heat is apparent, but there is a foul or very unpleasant odour, then the decomposing that is taking place is Anaerobic and the Aerobin should be emptied and the process started again. (The entire Biomass material should be disposed of). Before restarting this Aerobin, the ingredients recipe must be reviewed as this is the likely cause of why the process has turned Anaerobic and changes made to the recipe ingredients and volume of ingredients.

- Remove both Access Doors and review the activity within the lower half of the Aerobin. After the initial 4 weeks there should be clear evidence of decomposing taking place (starting) – the biomass should not be 'wet' but 'damp' – if unsure about the 'wetness' of the material – grab a handful of material and remove this material from the biomass – squeeze the material in your hand and the amount of moisture dispelled should be the same if the test was done to a damp Kitchen sponge – only a small amount of water should be displaced from the material. If you see Worms living inside the Aerobin, this is a good thing – it normally is a 'tick' that the composting effort is Aerobic and very healthy.

o Harvesting Compost from the Aerobin:-
  - Remove both of the Access Doors so that you have 2 sided access to the lower half of the Aerobin.
  - As a minimum allow the Compost to rise to at least the height of the top of the lower Lung Cowl, or ideally to the top of the Access Doors before harvesting Compost from the Aerobin.
  - Place a container against the edge of the Base adjacent to the Access Door opening.
  - Using a hand held Garden Fork – typically the type that has 3 bent (hooked) Fork Fingers – and 'claw' the Compost from the Aerobin into the container. Move to the other side of the Aerobin and repeat this step. As the Compost is removed the materials above will hold their position as they are effectively locked around the Aeration Lung components and the Internal Walls of the Aerobin. Once the Compost has been removed clean the bottom edge of the Base so that when refitted the Access Doors will engage fully with the Base. Refit the 2 Access Doors and remove the Lid of the Aerobin, then with a shovel or any long handle Garden Tool, tap down the top of the biomass so that the remaining materials in the Aerobin are collapsed onto the Base. Replace the Lid and then continue operating the Aerobin.

o Collecting Leachate or Compost Tea from the Aerobin:-
  - The Aerobin should be sitting above the surrounding ground so that Leachate that has reached the Leachate Tank will drain to a receiving collection vessel.
  - Open the Leachate Tap which can be found on one of the 4 corners of the Base. The Tap is in the 'Open' position when the 'Tab' of Plastic next to the Tap Outlet Spout is at 12 o'clock and is in the 'Closed' position when the same Tab is at the 6 o'clock position.
  - Fit a piece of either Garden Hose or flexible PVC Hose (300 mm long) to the outlet spout of the Tap.
  - Place a container or vessel under the end of the Hose and Leachate will be collected in the receiving vessel.
  - The Leachate should be diluted in water – 1 part Leachate to 20 parts water. So if 1 Litre of Leachate was collected this would yield 21 Litres of liquid fertiliser.

- Uses for Compost & Leachate Fertiliser:-
    - Compost – can be turned thru either garden or vegetable bed soils; used in potting plants and used as a surface mulch (layered onto garden or vegetable beds).
    - Leachate Fertiliser – the diluted leachate can be used as a fertiliser on all things growing in the garden – including garden and vegetable beds, flower pots, hanging baskets, lawns & trees – 'all things growing'.