

The Joracomposter

***AN ECOLOGICAL REVOLUTION
OF YOUR OWN***

the
Composting Warehouse



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Introduction

Congratulations on purchasing your Jora composter. Each individual household can really contribute to creating a better solution to the current problem of waste disposal by composting all its food waste with a JK 125 or JK 270.

Composting is an easy way to return organic matter to the soil. It conditions the soil and improves plant growth. By composting, you will help to reduce the amount of food waste going to landfill and also reduce your own waste disposal costs.

For optimal use of your JK 125/270 composter:

- When you are sorting your kitchen waste, only add what you are sure is compostable. If you are unsure about anything, don't put it in!
- Feed your waste into the machine every day or every other day. Don't put a week's worth of waste in all at once! A little and often is the best approach.
- Cut meat into small pieces, cut potatoes and fruit into a minimum of four parts, crumble up bread, tear tea bags, and tear egg cartons into small pieces. Cut flower stalks into 4-5 cm long pieces.

What can I compost?

Suitable for composting

- Food scraps (raw, cooked, fried, and smoked)
- Meat & bone (bones will be cleaned but not composted)
- Fish & bone (bones will compost)
- Shellfish
- Vegetables (raw and cooked)
- Eggs and egg shells
- Bread and biscuits
- Fruit (every kind)
- Coffee grounds and filters
- Teabags and tealeaves
- Paper (cross shredded or torn up into small pieces)
- Egg cartons (torn up into small pieces)
- Bedding from hamster/guinea pig cages
- Wood-pellet cat litter (used or unused)
- Soft plant waste

Unsuitable for composting

- Cigarette butts and cigarette ashes
- Chewing gum
- Tinfoil and other metals
- Rubber and plastic items
- Vacuum cleaner bags
- Milk or juice cartons, cling film
- Sawdust from treated wood
- Liquids - milk, soup etc.
- Disposable nappies/diapers
- Non wood-pellet based cat litter
- Hard, woody plant stems (even if shredded)

Three easy steps to starting your Jora 125/270 Composter

- 1 If you have any, place a small amount of active compost (or horse manure) into one of the empty chambers - a cup full is all that's required. (Always work with one chamber at a time). If not, don't worry - the process will usually start on its own without any help - it will just take a little longer.
- 2 Put your food waste into the first chamber followed by the wood pellets/sawdust in the correct ratio (see below).
- 3 Close the lid and rotate the unit once or twice.

Note: The compartment is full when there is 10cm/4in of empty space left at the top of the chamber. Once full, the temperature in the chamber will rise further and the contents will have finished composting by the time you have filled the other chamber.

Three easy steps (continued)

Capacity: The unit has two compartments, and you should only fill one at a time. The JK 125 can cope with up to around 12 litres or 22 pints (U.S.) per week of waste, and the JK 270 up to 30 litres or 55 pints (U.S.) per week. Note that the waste should be added to the unit frequently (every day or two) in small quantities - NOT in large quantities infrequently!

Chop and Cut: For best results, all waste should be chopped into small pieces before it is put into the composter. This is important, as it will greatly reduce the decomposition time of the waste. Note that if you are particularly conscientious about the cutting-up and mixing, and monitor the process closely, it is possible for the unit to cope with larger volumes of waste than those given above.

Add Wood Pellets (or Sawdust): Wood pellets are added in the ratio 1:10 (wood pellets : waste) by volume to add carbon and to absorb moisture. If using sawdust, the ratio needs to be 1:3 (sawdust to waste). Coir (coconut fibre) can also be used successfully.

Rotate the Unit: Rotating the unit draws air in through the air vents, preventing bad smells from occurring, and it also mixes wet and dry matter. One turn of the unit with each new quantity of waste is sufficient to aerate the contents. Rotate the unit more frequently if the waste is very wet, to ensure even distribution of the sawdust or wood pellets. Note that the air vents are prone to blocking up. Check them regularly and keep the holes clear.

What not to do!

- Don't let the waste get too wet in the composter. Waste should be drained in advance. Don't pour in milk, soup, or sauces.

Decomposition

- Don't let the waste get too dry - moisture is necessary for the nourishment of the micro-organisms that break down the waste. When adding sawdust or wood pellets, be careful not to add too much at one time. They both have exceptional absorption properties and if the waste becomes too dry decomposition will be impeded and the mixture will form lumps. You will learn to recognise the correct consistency - the waste should be moist, not too wet, and not too dry!

If there are lumps in the mixture, these can be broken up with an implement such as small hand trowel or fork.

Emptying the unit

Simply fasten the lid over the chamber you have just finished filling and rotate the unit and empty the finished compost into a wheel barrow. If your machine is not hung on the wall and does not have a high stand, you will have to empty it out onto a plastic sheet.



Handy Accessories

A bin with a lid next to the composter, for keeping sawdust or woodpellets dry and handy.

A small rake or trowel will be useful for breaking up lumps.

Tips and tricks

Positioning - Indoors or Outdoors?

Where you position your JK125/270 is simply a case of practicality. The unit can be sited indoors (garage or shed) or outdoors. If it is outdoors, it should be sited within easy reach of your kitchen regardless of weather conditions and, if you live in an area subject to prolonged and extreme cold wind conditions, try to reduce the wind chill factor by sheltering it with a fence or bushes. Note that you will get some dripping of liquid from the machine. If you have it indoors, it might be advisable to have a tray underneath.

The machine can be hung on a wall or stood on the ground. Note that if it is on the ground, make sure it is on a hard surface (slabs or planks). If the unit is placed on soft ground it will very likely sink into it as you fill it up!

Pollutants

Bear in mind that if you wish to use the compost produced from your JK 125/270 to grow vegetables, do not add anything to the unit that will pollute the compost (e.g. sawdust from treated timber).

Additional information

Temperature

Composting occurs at a range of temperatures, with different micro-organisms working in different temperature ranges. The temperature in the Jora composter can reach in the region of 70°C or 160°F

You don't have to buy a thermometer to check the temperature, as you will see the steam rising from the mixture. In fact, it should get too hot to bury your hand into - should you wish to try! Such high temperatures ensure that the waste is thoroughly composted and therefore suitable for use straight out of the machine, with no further finishing required.

At higher temperatures and with a high pH, ammonia will be present in the steam. If there is a strong smell of ammonia, add a small amount of woodpellets or sawdust as the mixture is probably too wet.

Composting in winter

If you are starting your JK 125/270 composter during winter months, and especially if you have small quantities of waste, it may help to add a hot water bottle to the first chamber to help generate the initial heat build-up. Once natural heat has started to build up from the composting process, the hot water bottle can be dispensed with. You shouldn't need to use the hot water bottle for more than a couple of days.

What to do with the finished compost

As a result of the high temperatures that have developed in the unit, the waste will be so thoroughly composted that it can be used directly on the garden as a mulch or soil improver. In fact, when you empty your compost out of the machine, it will have a distinct 'earthy' smell - not unlike soil.

Materials unsuitable for moisture absorption

It is very important to add the right type of material to absorb moisture from organic waste. Problems with the composting process are almost always due to the absorbent material being too wet or too coarse to begin with, or an incorrect woodpellet to waste ratio. Do not use:

- Sawdust from wet wood (inadequate absorption properties).
- Turf (has a low pH that dampens the process).
- Wood shavings or chippings, which have long fibres that have inadequate absorption properties.
- Coarse-cut straw or hay (inadequate absorption).

Additional information

The importance of sufficient aeration

The most suitable organisms for decomposition are oxygen breathers or “aerobes”. There must be an adequate movement of air through the pile of waste to supply their needs. With insufficient oxygen, the mixture will start to rot.

The Jora composter has been designed and constructed to allow “air conditioning” corresponding to weekly waste capacities. However, if the unit is overloaded with waste, there will not be enough oxygen in the mix and bad smells will develop. It is important to ensure that the ventilation holes are kept clear - the compost can often clog them up.

The importance of proper mixing

One of the big advantages of the Jora Composters is how easy it is to mix the contents. By rotating the container the material gets aired, the moisture gets distributed, and new surfaces of the waste are exposed for the micro-organisms to digest.

Balancing the waste correctly

The addition of woodpellets/sawdust has three important functions. Micro-organisms need both carbon and nitrogen. Green waste and food waste are very high in nitrogen. Therefore, carbon is needed to balance the waste. When you add dry woodpellets/sawdust, it

- absorbs moisture;
- adds structure to the finished compost; and
- provides a carbon source on which the micro-organisms feed.

Overview of a working Jora composter

Look inside your Jora composter regularly!

- Heat should be present from within the first week of use.
 - If lumps have developed in the compost,
 - break them apart with a hand rake.
- If the material is too dry, moisten it using water.
- Add the organic waste.
- Add the woodpellets in the correct ratio (1:10 pellets to waste)
- Close the lid and rotate the unit at least once.

Troubleshooting

How do I recognise when the mixture has the correct moisture level?

Take some of the compost mass in your hand (using rubber gloves if you wish) and squeeze it.

- If water runs down between your fingers, then it is too wet.
- If the heap doesn't hold together then it's too dry.
- If there are only a few drops then it is at the correct moisture level.

Temperature troubleshoot		
Problem	Reason	Remedy
Weak heat/ No heat.	1. Too dry. 2. Too wet. 3. Winter wind chill factor.	1. Sprinkle some water over the mixture. 2. See "bad smells" below. 3. Don't empty everything out at emptying time.
Maggots	Too wet / weak heat	1. Add dry woodpellets or sawdust and mix well. 2. Put in a hot water bottle to help heat.
Mushrooms	Natural occurrence	None
Big lumps	Too wet	1. Add dry woodpellets or sawdust and mix well. 2. Break up lumps.

Bad Smells. If you experience an unpleasant smell from the unit, this may be due to one or all of the following reasons:

- There isn't enough air getting through the mixture
- And/or the waste is too wet
- And/or you have possibly filled the unit too quickly (filling the unit too quickly brings the temperature down and stops the decomposition process).

If the ratio of sawdust/woodpellets to waste is incorrect and the contents are too wet to break down:

- Make sure the ventilation holes are not clogged;
- Add more sawdust/woodpellets;
- Rotate the unit several times to introduce more air through the mixture;
- If there are lumps in the mixture, break them up.

Smell	Reason	Remedy
Ammonia	Intensive process, high pH.	Add dry woodpellets or sawdust and mix well.
Rotting	Waste too wet Too little sawdust	Add dry woodpellets or sawdust and mix well.
Pungent, acidic smell (cheesy)	Oxygen deficiency - may be due to overfilling Waste too wet Sometimes occurs at the start of a new chamber cycle	Empty out some waste, add dry woodpellets or sawdust and mix well. Add woodpellets or sawdust and mix well. Add some ready-made compost and mix well. Unclog air vents.