

HOW THE HOTBIN WORKS

The **HOTBIN** has been designed to make hot composting easy by maximising what nature does naturally. Composting is dominated by bacteria – ‘happy’ bacteria deliver faster more successful composting.

Bacteria need the four elements below and are happiest when they are in the green zone.

Food

Bacteria need waste to eat – no waste = no bacterial activity = no heat produced. They digest different wastes at different speeds. Lots of easy to digest food results in fast quick heat release, slow to digest waste results in slow heat release. See the waste table.

Amount (Volume)	Small	Little	☺	Plenty	Lots
Ease Eating	Woody	Cellulose/Fats	Carbs/Proteins	☺	Sugars
Size/Pieces	Chunks	Chopped	☺	Pieces	Powders
Carbon/Nitrogen	200:1	30:1	☺	10:1	

Water

Bacteria need water to both grow and to help with digestion. If there is too little water the bacteria are unable to grow; if there is too much water, the waste becomes soggy and it blocks the air flow restricting the oxygen the bacteria need. This will result in a ‘smelly’ **HOTBIN**.

WATER	Too wet	☺	Too dry
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Oxygen

Aerobic bacteria need oxygen. If there is not enough oxygen, their anaerobic cousins take over and create a stink and release methane (X25 Green House Gas potency!).

OXYGEN %	0%	6%	10%	☺	12%	21%
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Warmth

Bacteria digest waste 32 times faster at 60°C than at 10°C. As a rough rule of thumb, using 30 days in a month, is if it takes 18 months in a ‘cold’ heap at 10°C, it will take 18 days in the **HOTBIN** running at 60°C.

WARMTH (°C)	0	10	20	30	40	50	60	☺	70	80	90	100	110
SPEED (x times)	0	1	2	4	8	16	32	☺	64	0	0	0	0

Sad – stopped working
 OK – Working but not at full speed
 Happy – Working well and producing heat to hot compost