Gardening

Making Compost In Record Time

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Fungi and bacteria are very efficient in breaking down organic matter. When it comes to making compost quickly, they are the micro-organisms you want to encourage. To do their job well, they prefer carbon and nitrogen in a ratio of approximately 25:1.

But what does this mean? Well, you can do a long maths equation (see below), but all you really need to know is to make compost quickly you need to use a hot or aerobic method. For this you need:

- **the correct ratio of organic materials - the smaller the particle sizes the better**
- **micro-organisms - added naturally with organic materials, animal manure or some mature compost**
- **moisture – to a level that resembles a damp sponge**
- **air - this is incorporated when you turn a heap.**

Heat is produced as a bi-product of getting these materials in the right balance and allows compost to break down in record time (6-12 weeks). If your compost does not heat up and decompose quickly, it may be out of balance. It may be too wet or have insufficient air, but more likely you need more nitrogen rich materials to feed the fungi and bacteria and hasten decomposition. Alternatively, you may simply be using a cold composting method. Cold composting is slower and generally dominated by worms and compost fly larvae. It is a perfectly legitimate method of making compost, it simply takes longer (6-12 months).

When it comes to composting, high carbon materials are not simply 'brown' and high nitrogen materials are not simply 'green', so it is best to avoid these generalizations. The individual materials you add to your compost contain both carbon and nitrogen, plus a wide range of other nutrient elements.

High carbon/low nitrogen materials from highest to lowest include:
paper, sawdust, woody prunings, wood and bark chips, eucalyptus leaves and cane mulch.

High nitrogen/low carbon materials from highest to lowest include:
animal manure (especially poultry) or pelleted chicken mature fertilizer, lucerne hay and grass clippings (both fresh and dried), fresh green weeds, commercial blood and bone, coffee grounds and fruit/vegetable waste.

It is difficult to find information on the exact carbon and nitrogen ratios of different compost ingredients. Even if you can find this information, not many of us want to do mathematical equations just to make compost! With that in mind here are some easy ratios to achieve that magical, hot C/N ratio:

2 parts <u>lawn clippings</u> + 3 parts <u>weeds</u> + 1 part leaves
OR
2 parts school fruit waste (preferably chopped) + 1.5 parts lawn clippings
OR
2 parts leaves + 1 part sawdust + 2.5 parts cow manure (real not bagged if possible)
OR
4 parts weeds + 3 parts paper + 1 part fresh chicken litter (or equivalent pelleted chicken fertiliser)

And for those of you who really want to know how C/N calculations work, here is an example:

12 parts lawn clippings : 1 part sawdust = C/N 28.80 (29:1)

Lawn clippings have 6gm carbon + 0.3gm nitrogen (C/N ratio of 20)

Sawdust has 34gm carbon + 0.08gm nitrogen (C/N ratio of 450)

<u>Carbon = (12 parts lawn clipping x 6gm carbon) + (1 part sawdust x 34gm carbon)</u>
Nitrogen = (12 parts lawn clippings x 0.3gm nitrogen) + (1 part sawdust x 0.08gm carbon)

<u>= 72 + 34</u> = 106 carbon
= 3.6 + 0.08 = 3.68 nitrogen = 28.80 Carbon/Nitrogen Ratio

Figures and ratios taken from: Composting: Making Soil Improver from Rubbish CSIRO (1978). This brilliant little booklet is out of print, but can find it online and apply to download an original copy.