

INGREDIENTS

Compost works best starting with alternating layers of "brown" and "green" materials, added in a ratio of around 3 to 2 by volume. If available 1 part animal manure/fish waste is a very useful source of nutrients.



"BROWN" MATERIAL

v(te mai/mei), Premna (te ango/ valovalo) and Guettarda (te uri/pua) with some rinsed seaweed (te tiwiita/limu), if available. This provides the energy (carbon) for the biology in the compost pile and helps aerate the heap.

"GREEN" MATERIAL

Green material contains a lot of the nutrients, in particular nitrogen.

- Sappy green leaves, all chopped. The most abundant is Scaevola (te mao/gasu) but more useful nutrient sources are: Yellow beach pea (te kitoko/te biin/sake-ta sega), chaya (te tiaia/ tiaia), drumstick (te turam/saitiani), Pisonia (te buka/pukavai), purslane (te boi/mtea/katuli) and Sida (te kaura/akata);
- Also green cut grass, vegetable and fruit scraps. None of these are essential but a mixture of at least some of these materials is good.
- Pig and chicken manure; fish scraps and sea cucumber (lollyfish; *Holothuria atra*) are all high in nitrogen. **Note:** for environmental reasons do not over-fish lollyfish.



OTHER ADDITIVES

- Old compost or dark soil from under trees in particular te uri/pua (to inoculate with soil biology Well rotted coconut stems broken into small pieces can also be useful.
- There is some evidence from Kiribati that addition of ground-up rusted iron (e.g. 2 mm) will assist in reducing iron deficiency and this effect should be enhanced when rust is added during the compost making.

Some ash (1 cup per layer) and rusted iron can also be lightly sprinkled to add nutrients.



WATER

Water well but do not over-water. Ideally the compost should be moist without water dripping when it is squeezed.

CLIMATE

If it is very wet or dry cover with a tarpaulin or banana leaves.

Leave the pile to heat up for 1 week and then commence turning every week, more frequently to speed up the process and if the pile is too wet or dry.



HOW TO MAKE COMPOST

- In the wet season make a base 20cm high with coarse plant materials such as sticks or coconut husks to help air circulation.
- Add a 25cm layer of brown material such as fallen breadfruit leaves. Follow this with a 15cm layer (hand width) of green/nitrogen-rich material that is easily decomposed such as green leaves, kitchen scraps and manure.
- Add some dark soil from under trees and/or a sprinkle of old compost.
- Some ash and rusted iron should also be lightly sprinkled to add nutrients.
- Water the layers well but do not over water.
- Repeat the layers (except for the base layer) until the heap reaches 1m high.
- If it is very wet or dry put a tarpulin over the top. Even banana leaves will help.
- The compost pile should heat up insode after 2-3 days. Check the tempreture by inserting a knife inside to the centre of the pile. The blade should be quite hot to the touch.
- Leave the pile to heat up for 1 week and then commence turning every week, more frequently to speed up the process and if the pile is too wet or dry. Ideally the finished compost should be oist without water dripping when squeezed.

With frequent turning the compost can be ready for use in 10 weeks or less.

For additional information on compost ingredients see Nutritious leafy vegetables for atolls -Factsheet 13: Nutritious leafy plants: also valuable for soil health.

This fact sheet is one of a series produced for the Australian Centre for International Agricultural Research (ACIAR) funded activity "Improving soil health, agricultural productivity and food security on atolls: SMCN2014/089". Compiled by Geoffrey Dean and Siosua Halavatau.



**Making Compost
For Healthy
Atoll Soils**