

Is organic the way to grow?

A photograph of a field with a sign that reads "NO SPRAYS ORGANIC" and a barbed wire fence in the background. The sign is made of a dark material, possibly wood or metal, and is mounted on a wooden post. The field is filled with tall, green grass. In the background, there are trees and a clear blue sky with some clouds. The barbed wire fence is made of several strands of wire, with the top strand being barbed. The sign is positioned in the foreground, and the fence runs across the middle ground. The trees are in the background, and the sky is at the top of the image.

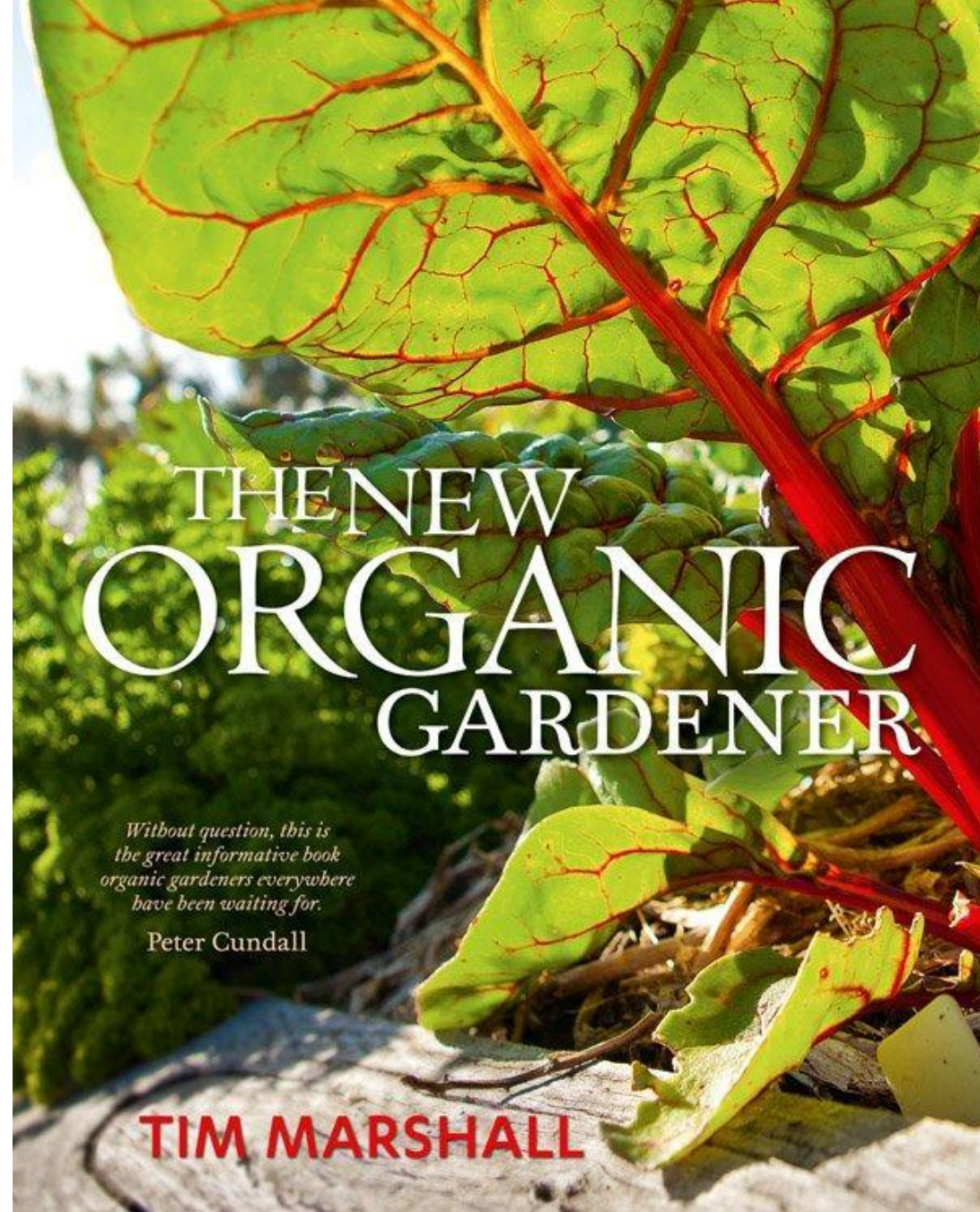
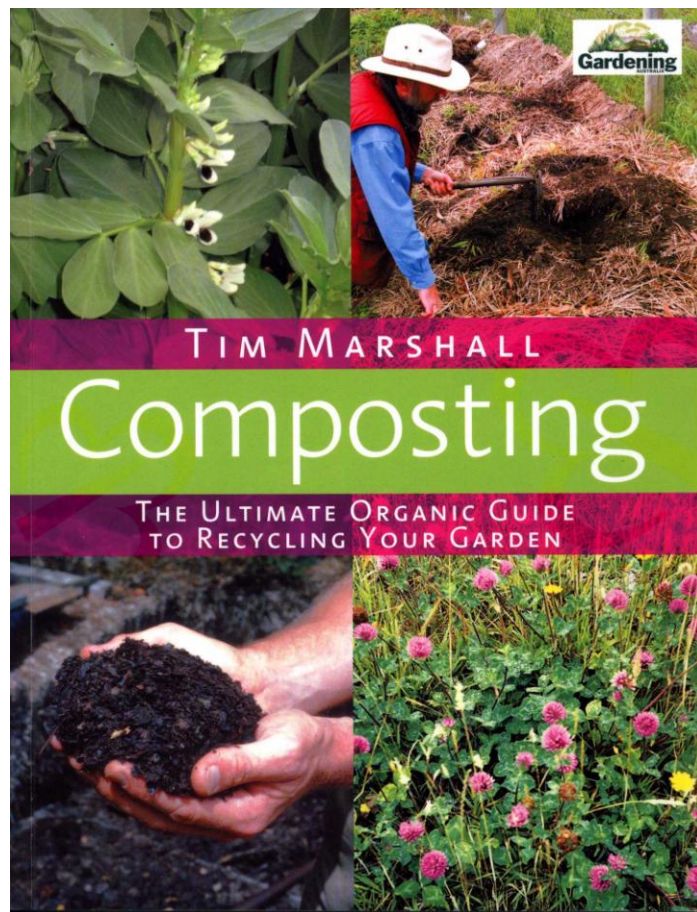
NO SPRAYS
ORGANIC

Tim Marshall

October 2017

ABOUT Tim Marshall

- 40 years experience in organic industry
- 30 years experience in organic standards, certification and inspection
- *Publishing* – books (Composting, Weed, Bug, New Organic Gardener, Dung Beetles, Climate Change), manuals (Organic Wool, Viticulture, Dairy, Organic Market, Greenhouse Production, Using Biological inputs), magazines and newspapers
- Have visited more than 4,500 certified organic properties in 33 countries



Why grow organic

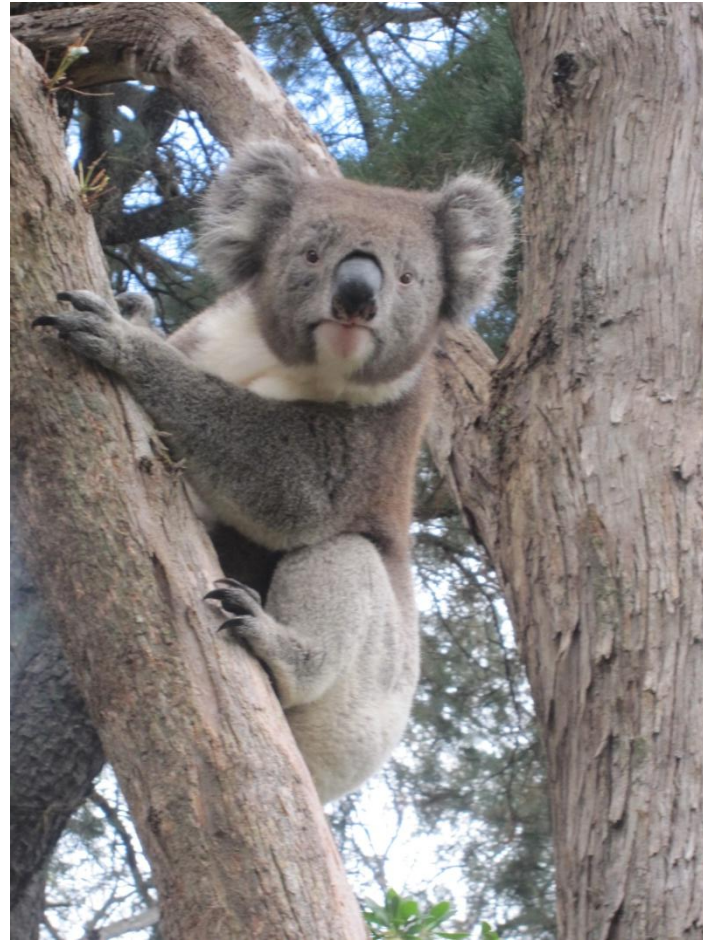
- Avoid personal exposure – children and pets
- Preserve natural biodiversity
- Produce clean food
- Increase soil health
 - Sequester carbon
 - Better infiltration and water storage
 - Plant health

Because we can: organic now is easier than ever!

Why organic?

Our home

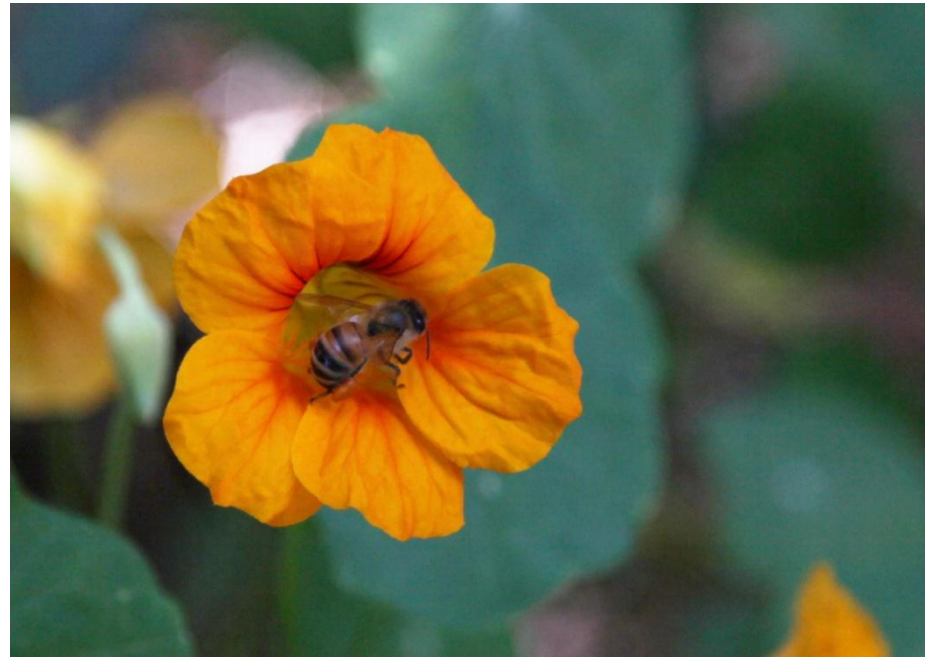
Where children and pets play, and wildlife visits





Why organic?

Our home, where we grow some of our food



Why organic?

To encourage biodiversity

Why organic?

Because we can: Scale is possible
and there is new technology





Why organic?

Because we can: Scale is possible and there is new technology





Why organic?
Sequester carbon



Volume of Water Retained /ha (to 30 cm) in relation to soil organic matter

0.5% OM = 80,000 litres

1 % OM = 160,000 litres

2 % OM = 320,000 litres

3 % OM = 480,000 litres

4 % OM = 640,000 litres

5 % OM = 800,000 litres



MOST OF US ARE NOT TRAINED

- Do not know which chemical to use
- Do not read labels
- Do not know how to measure and calibrate (CUP locate 3 cases of 100 X application)
- Do not use protective gear
- Do not understand concepts such as 'point of drip'



THINGS YOU CAN DO

- Replace hard surfaces with growing plants or gravel, or re-vegetate waste areas with native plants.
- Let lawns grow longer and leave clippings on the soil surface.
- Compost all organic matter from the kitchen and garden.
- Chip larger clippings and use as mulch



THINGS YOU CAN DO

- Use only organic fertilizers, including compost, crushed rock, manures, seaweed, fish emulsion, humate and aerated compost tea
- Stop using synthetic pesticides. Use softer alternatives, such as Dipel, Success, Eco-Oil, organic herbicide, etc.
- Grow flowering plants, to provide food for beneficial birds and insects all year round - local natives are an easy way to achieve this, but exotic plants are OK if they do not threaten local bushland.





Grow at least some of your own food. Herbs and greens are easy



Food gardens can be attractive



Keep soil covered with plants and/or mulch

Use plants to increase soil carbon

- The most economical and effective way to increase soil carbon is to grow it.
- Plants get 95 - 98% of their needs from the air and water - Carbon, Hydrogen and Oxygen account for over 95% of the chemical composition of an average plant - 5% or less comes from the soil.

Carbon dioxide + water + sunlight and photosynthesis produces oxygen and glucose/fructose

The carbon gift - how plants increase soil carbon and soil fertility

Between 30-60% of the atmospheric CO₂ absorbed by plants is deposited into the soil as organic matter in the form of bud sheaths that protect the delicate root tips and as a range of other root excretions.



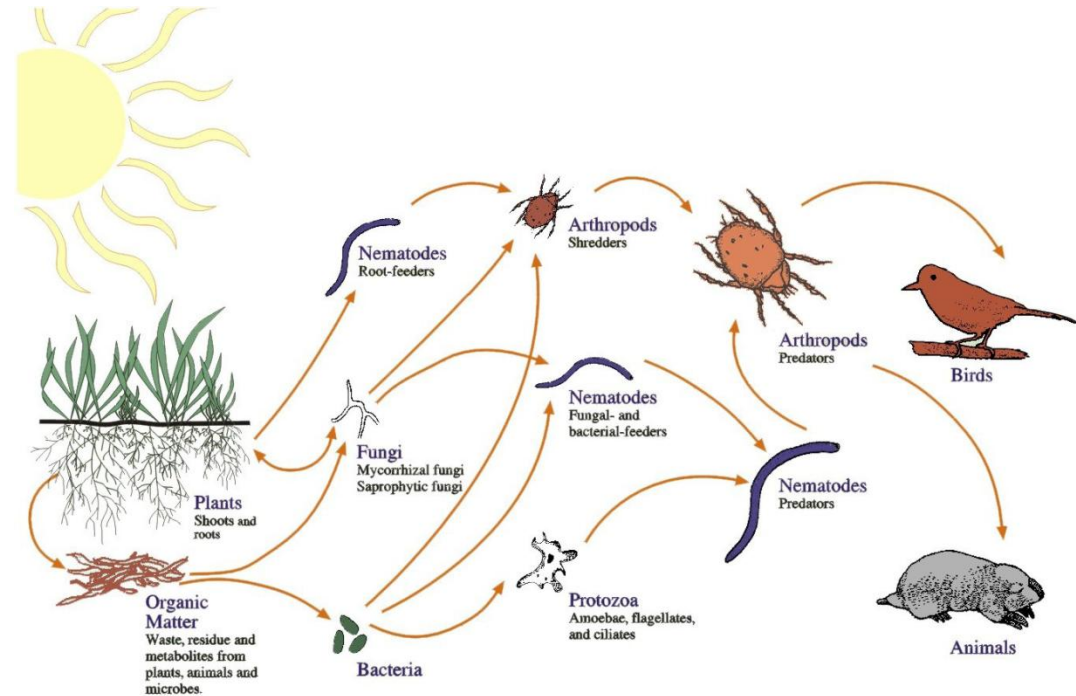
Non-organic inputs are harmful

Synthetic nitrogen

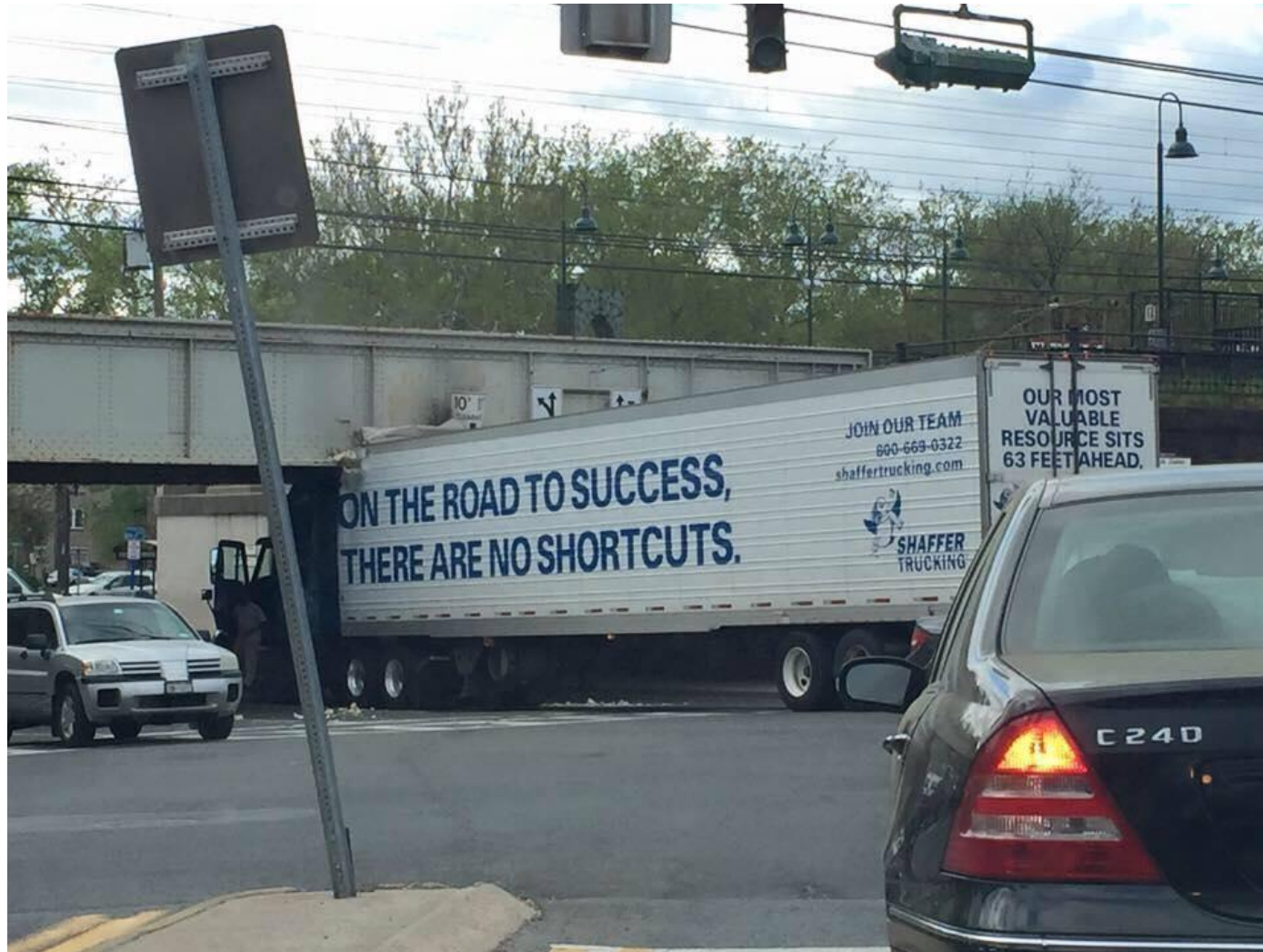
- Inhibits natural N-fixation.
- Encourages soil organisms that break down organic matter rather than carbon-builders.

Herbicides

- Inhibit natural N-fixation.
- Directly kill soil organisms.
- Harm water quality.



Read an organic standard
(National Standard, NASAA and ACO are free to download)







Keep pesticides away from our food



Thank you



EAT THE BEST ORGANIC FOODS, DRINK PLENTY OF PURE WATER AND GET A LOT OF EXERCISE.