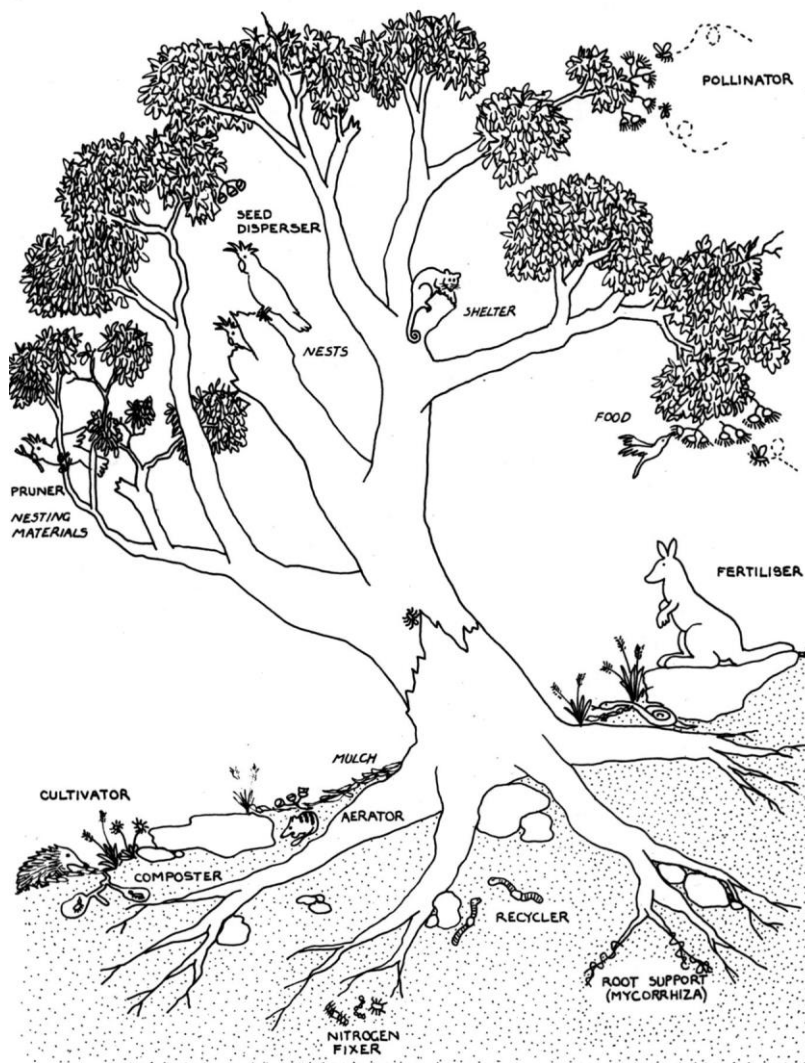


Morrow, 1993, *Earth Users Guide to Permaculture*, p.49 fig.9.1



A 'WARU'

Everything gardens,
or has an effect on
its environment.

A 'Waru' is an
Australian Aboriginal
word for the
complementary
relationship between
organisms (a 'guild').

Use biological resources
rather than mechanical or
agrochemical solutions.

HOLMGREN

8. Principle on Biological Resource Use



5. Use and value renewable resources and services.

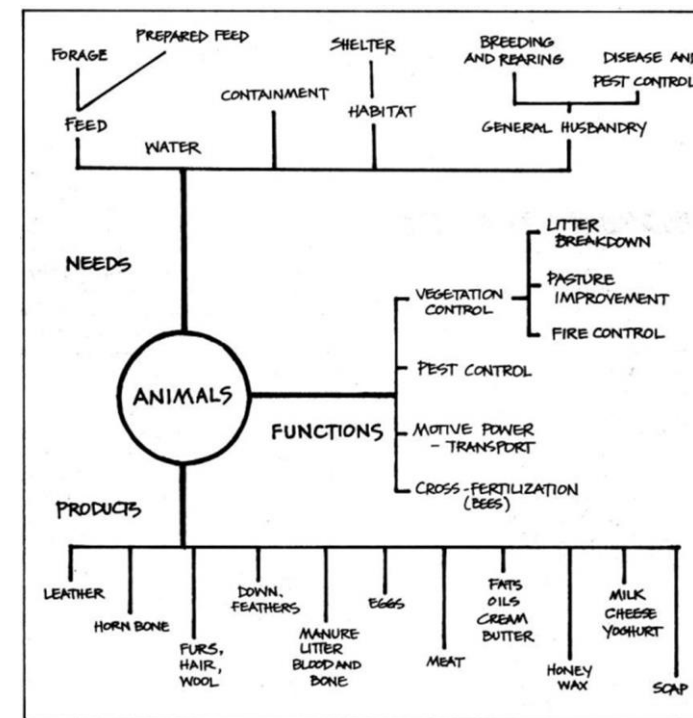
"Let nature take its course".
Make the best use of nature's
abundance to reduce our
consumptive behaviour and
dependence on non-
renewable resources.

One term often used in permaculture is 'animal tractor system'. This refers to using animals in your system, doing what they do best. Chickens are used for scratching clean an area and eating weed seeds, pigs are used for ploughing up land, goats are used to control woody weeds, cows and sheep maintain pasture areas, and worms work hard converting biological material to fertiliser. The following table details some characteristics of specific animals.

(From Mars, 2007, *The Basics of Permaculture Design*, p.124, table 11.2).

| Animal | Uses, notes | Manure as fertiliser | Special requirements |
|----------|--|----------------------|---------------------------------------|
| Horse | draft animal | fair | shelter |
| Cow | milk producer, manure | poor, slow release | consistent good quality feed for milk |
| Sheep | wool or meat | fair | shearing |
| Rabbits | meat, fur | very good | shelter, protection from predators |
| Pigs | meat, omnivorous diet | poor | shelter |
| Chickens | eggs, meat | good | shelter, protection from predators |
| Goat | milk producer, need strong, secure fencing | good | consistent good quality feed for milk |

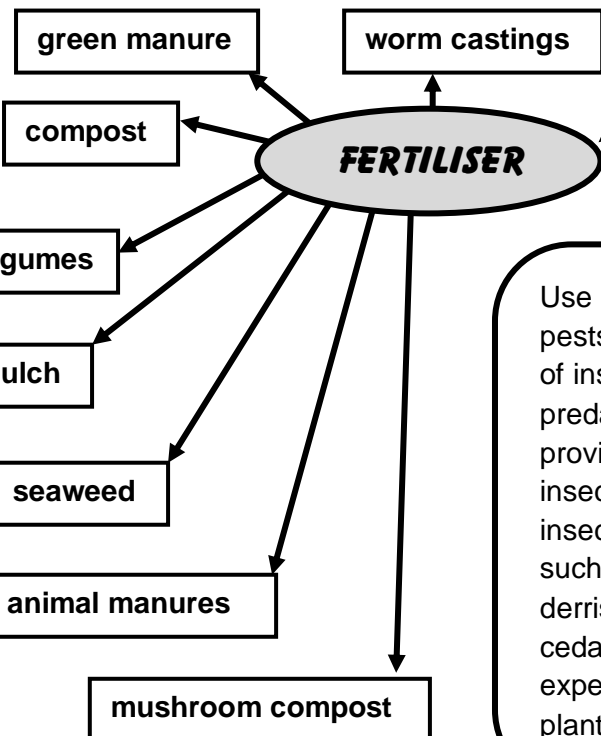
ANIMALS



Introduction to Permaculture, p.146, fig.7.1

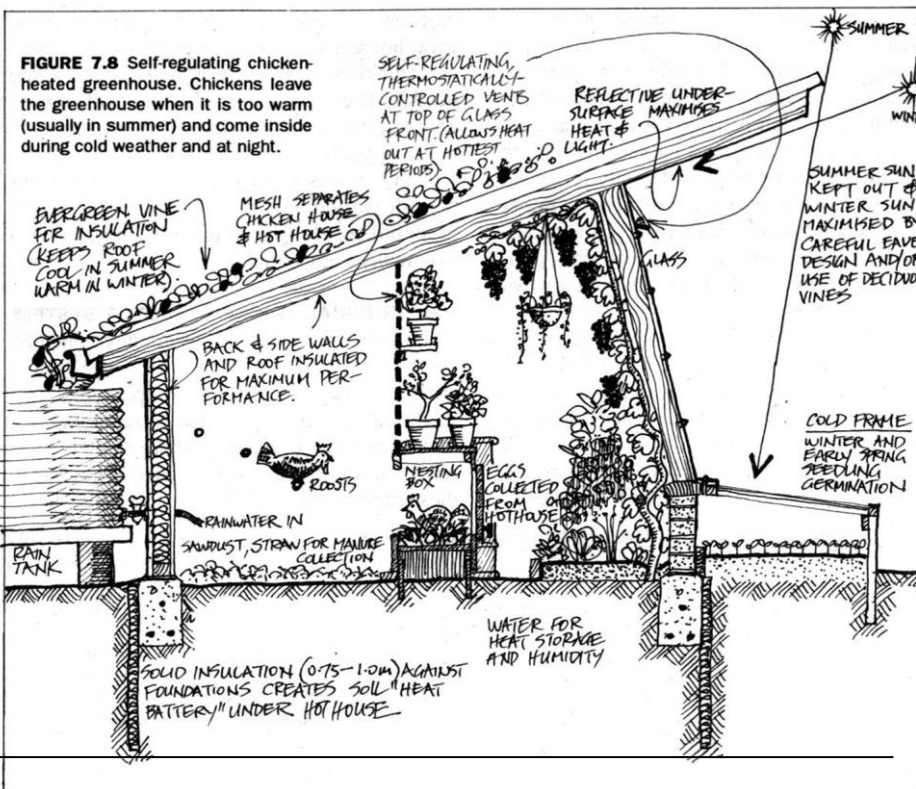
www.permaculturefundamentals.org

PRINCIPLES
Mindmap 8.



PESTS

Use biological control of pests through interplanting of insect repellent and predator attracting plants, provide habitat for frogs and insectivorous birds, make insecticide spray from plants such as chilli and garlic, use derris, neem and white cedar. For herbicides, experiment with allelopathic plants and extracts.



Mollison & Slay, 1993, *Introduction to Permaculture*, p.154, fig.7.8