

## **Some Essentials OF PERMACULTURE DESIGN SYSTEM are water management, windbreaks, seeds or plant material**

**WATER MANAGEMENT:** permaculture systems use swales (ditches on contour), ponds and water channelling to use the water as many times as possible before it leaves your system and then it should leave in a clean, drinkable condition.

**WINDBREAKS:** reduce the loss of water in the system, provide shade and shelter from frost for tender plants and should enrich the soil by either providing shelter for animals such as predatory insects and worms and/or by fixing nitrogen in the soil. Leguminous species such as acacias, pea trellises etc, fix nitrogen. Windbreaks can be made cheaply with cardboard boxes weighted down with paper/rocks/potted plants or bales of straw (rolled over after a couple of months to kill any sprouting seed that you may not want). Plant small windbreak plants on the sheltered side of the box hedge for longer term permanent windbreak.

**SEEDS:** As mentioned earlier, save all the seed from the fruit and vegetables you buy: e.g. watermelon, rockmelon, tomato, passionfruit, capsicum. Try planting out the soggy left over alfalfa sprouts. Save all the carrot, parsley tops *Umbelliferae* and propagate these on soggy paper or cotton wool (use whatever you have available, don't go out and buy it.) Buy bird seed and plant it under a layer of shredded paper, straw (one bale will go a long way this way), grass clippings. This will grow to give you more seed, something edible and tasty and your first crop of mulch.

**MULCH:** Don't plant until you have mulch. Mulch comes in many forms, bills, docketts, junk mail, old rags, newspaper, cardboard (the mother of all mulch), grass clippings if you have a rake and lawn, other peoples grass clippings are much better as they sometimes rake it and put it into garbage bags ready for you instead of in the bin. These garbage bags can store and compost the clippings for you while being used as weights to hold down sheet mulch in the garden.

**WEIGHTS FOR SHEET MULCHING:** Use heavy sticks, off cuts of wood, boxes, potted plants, water containers, rocks etc., to hold the mulch

in place. This helps retain more water in the mulch and stops it from blowing away. The weights can be reused once the mulch is moulded and stabilised.

**PLANTS:** Walk around the neighbourhood speaking to people about their garden, asking for snippets (take a bag and pair of scissors with you) often they will give you plants to get you started. My advice is to take what they offer with thanks - don't knock back something because you haven't learnt a use for it yet. Except for highly invasive plants in fragile locations, most plants will be at least be a pioneer species. Avoid growing plants that are difficult to grow in your area until you have established a good microclimate, rich soil and natural supply of fertiliser.

Collect seed and cuttings from plants overhanging boundary fences.

**PROPAGATION** Try to be self reliant with propagation. Avoid hormone powder remembering to accept some losses in the strike rate of cutting. Hormone powder is for quick results as required by nurseries. Your plants will have the best care and natural selection needs to play an active role. You can be very successful without chemicals just as mankind was for thousands of centuries before specialist manufactured chemicals.

**ANIMALS:**

**Do not install animals until you have fodder crops ready for them** and a means of protecting young plants. You cannot always get rid of your animals as easily as you got them.

Animals need housing: this costs in time, resources and money.

The cheapest animal to house is the worm. Try starting out with **worms**, they'll supply you with rich fertiliser, and are less time consuming than compost.

**Dogs** probably come next in terms of housing costs, they can survive in a makeshift kennel, don't require protection from predators but need space to run (hence some lawn or pasture), control and training, attention and affection. They offer only a little security which is handy given that plants/tools/chooks do get stolen or harassed by dogs and cats.

Next can be your portable 'lawn mowers' - **Guinea Pigs** (require housing and protection) or

**Sheep** (keep them out of the garden they'll eat the lot!)

'Lawn mowers' reduce the current work load on a conventional system of 'house and lawn and consumerism'. I know of an elderly woman who has not had to worry about the lawn now for ten years, she lives in a sub-tropical suburb and has one healthy rarely shorn pet sheep. 'Lawn mowers' will give you more time to concentrate on modifications to the system.

Avoid **hardhoofed animals on fragile soils e.g. horses** in the early years as they compact the soil and cost the earth during drought and sickness.

Never over stock, keep stocking rates to drought or similar disaster level. Remember that the 'lawn mowers' will eventually have to go if you are doing the permaculture job well. You have the options to either eat or sell them.

Consider **Ducks**, they are hardier than chooks, provide eggs, love snails, eat a lot of grass and weeds and do less damage to a young garden than chooks.

Install your **Chicken** tractor when you have numerous plants ready to be planted and matured fodder crops. Or use chickens for large areas of lawn, they reduce need for noisy pollutive mowing AND turn grass (and other inedibles/poor tasting edibles) into fertiliser! They also reduce leaf litter in fire prone areas.