

Sustainable Gardening – How Does Your Garden Rate?

First, let's compare unsustainable and more-sustainable features that may be found in the backyard and the garden – how does yours rate? Print this and tick those that apply to your garden, noting the benefits claimed for the 'more sustainable approach':

| | Potentially UNSUSTAINABLE FEATURES in your garden? | In contrast, a MORE-SUSTAINABLE approach : | BENEFITS FOR YOUR HOUSEHOLD OF CHANGE: |
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| MAINTAINING SOIL FERTILITY | Soil regularly dug over and fertility maintained only with soluble chemical fertilisers. Bare soil in winter, loses some nitrogen when rained on. Bare soil more easily compacted or dried. | Soil fertility maintained with mulch, green manures and composts. Mostly 'no dig' methods used, to minimize soil disturbance or compaction. Ground in use all year. | Less backache from digging (but labour is still required to make compost or carry mulch materials). Soil fertility stays higher. Less nitrogen is lost from topsoil in winter. |
| COMPOSTING & RECYCLING | Garden prunings and kitchen peelings disposed of mixed into the kerb-side waste collection, &/or sent down sink waste disposal unit to sewage works, or driven to the tip, or burned while still green in smoky bonfires. However some easily-spread weeds are not suited to composting (e.g. Oxalis, Tradescantia, Hedera = ivy). | Prunings and peelings retained in garden for composting. Woody material shredded as mulch (using mower or hired shredder). Bonfires used very little. Twigs and cabbage tree fronds bundled as wood-burner kindling and larger logs dried as firewood. Material stays on-site. | Compost provides soil-food for a vegetable garden at a lower cost than buying fertilisers. Mulch for shrubs. Some free fuel for you (or a neighbour) if using a clean wood-burner. Less car use. No or lower spend on green waste disposal. |
| BIODIVERSITY & SEED/PLANT SELECTION | Food plants limited to just a few varieties. These all get pests at once, all ripen at once, and a glut can mean crop wastage unless you give it away. | Diversity of food plants, plantings and harvests at different times. Use of 'companion planting' to aid plant growth or deter insect pests. | More varied food, reduced pest damage, harvest quantity spread over more weeks, have time to process any surpluses. |
| | Plant seeds chosen are mostly modern hybrids and are not disease resistant (so will need chemical-fed gardening for largest crops). Also hybrids not suitable for seed-saving as they will not breed true. You have to buy new seeds each year. | Plant seeds chosen are mostly established garden crops and flowers that were originally selected for climate hardiness and disease resistance without chemicals. Such 'heritage seeds' or 'traditional varieties' can be saved each year, unless cross-pollinated by other variety in the same or nearby garden. | Saving your own seeds and winter roots saves money on purchases, and ensures that the plants grown continue to be well suited to your garden. Saves money on chemical fertiliser and pesticides. Crops look more varied, colourful, interesting. |

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| | Ornamental flowering plants are mostly exotics (= imports to NZ) some of which tend to escape from gardens to become weeds in natural bush areas, especially. if no natural insect browsers or diseases are here to control them. | Ornamental plants include NZ 'endemics' (native plants to NZ, found only in NZ) with their associated special wildlife and climate adaptations. These tend to be survivors. | Easy care! The ornamental garden attracts native insects, lizards and birds; and is better adapted to NZ's climate extremes, when exotics may die (apart from the weeds) |
| | If a cat lives there, householders will allow it out at night and accept bird & lizard kills. Cats also kill wetas. On the positive side cats also control mice and rats which themselves attack birds' nests. | If a cat lives there, it will be kept in at night and have a bell on collar, to reduce wildlife kills. Bird feeding area cat-proofed, if local cat kills native birds. | Enjoy seeing more birds visiting garden, even if few will likely nest there. You might plant favourite foods of some native birds to attract them: tui, bellbird, kereru, perhaps? |
| | Potentially UNSUSTAINABLE FEATURES: | In contrast, a MORE-SUSTAINABLE approach: | BENEFITS FOR YOUR HOUSEHOLD OF CHANGE |
| SHADE & SHELTER | Randomly planted trees and shrubs with no consideration of position relative to house windows, temperatures, sun angles or wind. Results in winter S wind exposure, summer N and W house over-heating and sunburn when out in the garden. | Trees, hedges or trellis supporting climbers at N and W to help with summer shade, and at S for crop shelter. If also deciduous they help make the most of sunshine entering the house and garden in winter, | Reduced incidence of sunburn and future skin cancers. Less emphasis on powered cooling and heating of homes. Larger crops, longer growing season. |
| LAWNS & PAVED AREAS | Large proportion of lawn area relative to natives or crops, fast growing grass species to cut often, gets summer daytime watering with sprinklers. Excess water runs to storm drains, taking lawn chemicals with it. | Smaller lawn area, more low-growing natives as alternative landscape. Less garden watering and typically this with dripper hoses in evening, on a timer. Grass a mix of slower growing, drought-tolerant species for less frequent mowing, and none in drought. No run-off to storm drains. | Saves water, which saves you money if metered. Saves time & fuel on lawn mowing, Can use the time saved for more productive food gardening, or flowers. |
| | Fewer vehicles, so less parking space and paved areas needed. Vehicles washed on the grass not road to protect storm-water route to streams. | More space for veggies or for children's play. Less paving so less storm-water generated or polluted. | Household has multiple vehicles, so paved areas or lawns likely to be used for regular vehicle parking, which compacts soil. |

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| | Power mower and trimmer used to cut grass: if petrol-fuelled this will be inefficient and air-polluting, and noisy. Mown very frequently for a close cut, even in hot weather. Gets dusty and patchy – weeds invade the patches. | Smaller lawn, so more possible to use a push mower. Otherwise electric mower (on hydro-power electricity) used in preference to a petrol one. Lawns cut less often, taller grass allowed in hot summer. Other species grow with grass inc. NZ native plants. | Reduces petrol used in power mowing and gives cleaner air, less noise ¹ . Exercise gain from hand mowing. A higher cut height means less frequent summer mowing and helps keep it green and less dusty. |
| EDIBLE GARDENING | No or few food plants grown in your garden – fresh food is bought all year from supermarkets and greengrocers. This perpetuates commercial growing of chemically sprayed crops, and food imports that may be fumigated on arrival | Use least amount of space to produce a wide range of food for the household, over an extended season. Also buy from local growers at other times, and bottle/dry/preserve any surplus produce for use later. | Good quality food grown without use of chemicals. Ready supply at hand, with surplus dried, bottled or bartered away. Reduces need for transport. |
| | Potentially UNSUSTAINABLE FEATURES: | In contrast, a MORE-SUSTAINABLE approach: | BENEFITS FOR YOUR HOUSEHOLD OF CHANGE |
| WATER USE & LOW WATER GARDENING | Decorative plants (and food crops) that need extra water are located close to plants that do not, resulting in death of some from <u>over</u> -watering. | Plants that need extra water are grouped together by design, as are the drought- tolerant plants (known as 'xeriscaping' or design for drought). | Less money spent on replacing plants that have died, fewer lost crops. |
| | Mains tap water (expensive to treat, and may contain chlorine) is used on garden. No timers or controls used. | Roof-collected rainwater (stored in the dark) is used on garden when available, before tap-water. Occasional 'grey water' from bath or washing machine might suit shrubs but is not used on crops. | Saves tap water, which saves money if metered and charged by volume. Gardens are thirsty! |
| PEST & DISEASE CONTROL | Pest insects and weeds present but are 'controlled' with repeated spray doses of chemicals. Side-effect is a reduced population of bees and beneficial insects. | Natural predators such as frogs, lizards, birds and insects control the pest populations instead of toxic chemicals. Weeds tolerated, ecology know-how used. | Reduced chemical residues on food. Better pollination rate for flowers and fruit.; more crop. However, food may not look as 'perfect' as in the shops. |

¹ As an example of pollution from gardening, consider the inefficient two-stroke petrol motor that powers a lawn mower. A study in Sweden suggests that the effective air pollution from cutting grass for an hour is about the same as driving a car for 150km, and calls for catalytic converters on motor mowers! (Published at: <http://ens.lycos.com/ens/may2001/2001L-05-31-06.html>) If a lawn is near the house, and you're not converting it to crops, why not use an electric mower or push mower!

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| | Flowers separated from fruit and vegetables, which are also weeded to remove all wild flower 'weeds', even the edible ones. Crops grown in rows or blocks of single varieties. | Certain wild and garden flowers are intentionally grown as edible weeds and with food crops to encourage pollinator insects and useful hoverflies and caterpillar-parasitic wasps. | Some natural pest control reduces need to buy chemical sprays and keeps food spray-free. (Flower seeds may be less expensive than chemical sprays; & blooms look cheerful). |
| WEED MANAGEMENT | Exotic garden plants, brought to NZ from other countries, dumped or seed allowed to escape into surrounding bush areas, parks, stream-sides, coastline, etc. (see list of pest plants) | Invasive or 'pest' exotic plants are clearly known and neither purchased nor grown in gardens, or if growing already their annual spread is carefully controlled (no dumping of cuttings, flower heads removed before the seeds form.) | Keeps native bush, streams and coastal areas close to towns intact, for people to enjoy, and as continuing wildlife refuges. |
| <i>& what would you add, from your own experience? Share it with the class/study group, if there's time.</i> | Unsustainable example? | More sustainable alternative? | Benefits? |

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Afterthought: NZ Writer Katherine Mansfield wrote in her 15 October 1922 letter to John Middleton Murray (published 1951):
 "Grow things. Plant. Dig up. Garden. I feel with all the force of my being that 'happiness' is in these things.
 ...Do anything to work with your hands in contact with the earth."