

Plant Selection.

Select plants with care.

Lawns

Chewings fescue and some native Poa grasses are more drought tolerant for lawns than ryegrass and white clover.

In dry states of the western USA, lawns are often dormant or fallow, much the same as some Central Otago street verges which revert if not watered in summer.

Conditions Tolerant Trees and Shrubs

Many trees, shrubs and herbs are tolerant to drought and heat, but our out-of-season frosts restrict that selection.

To start, choose native tussocks and shrubs: Kowhai, Coprosma, Olearia.

Exotic tree species like wattle, eucalypt and oak are also suitable.

Evergreen species will use more water than deciduous broadleaves as they transpire all year round. But broadleaves require an increase in water during summer.

Avoid shallow rooted trees like conifers as they suck nutrients and moisture from the topsoil. Plant herbs and shrubs instead.

Further resources

See for yourself the plants that others are growing and adapt these to your own corner of the world.

Seek advice about suitable species from garden shop proprietors and from the many gardening books on the market. Information is also available on the web.



For information on sustainability workshops

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Wise Use Of Water In Central Otago Gardens



Copy and photos sourced by Barrie Wills

The Setting

We live in a semi-arid climate, quite different from the humidity that affects most of New Zealand.

Surrounded by mountains that divert the cooler, moist airstreams from the Tasman and Pacific oceans, those cold, wet southerlies pass up the east coast with minimal impact on Central Otago.

But airstreams moving in a westerly or northerly direction are stripped of moisture as the air mass rises over the southern alps and cause the equinoctial, hot and dry 'Norwester'.



Temperature and Rainfall

Temperatures in Central Otago fluctuate between 20° to 30°C in summer and -10° to 15°C in winter. The region's annual precipitation varies from 350 – 450 mm, offset by high evaporation in summer with hot temperatures and high winds.

Most rainfall occurs in November through January, spring and early summer. Winter is the driest period, followed by late summer/autumn. Frost might occur on 300 days annually, depending on the severity of the season.

Climate change appears to be slowly evening out the seasonal temperatures. Summers are becoming cooler, winters warmer with a more variable precipitation.

Water is Scarce

Water is scarce in many parts of Central Otago. How best to make use of that resource in your garden?

Soil

Soil tends to be light, loamy or sandy and water holding capacity is low.

Compost and Feed

A good, deep layer of organic compost will improve soil content and maximise water retention. To integrate the compost and aerate the soil, add plenty of worms.

Grow a temporary cover crop like mustard or lupin and dig these in before they mature. As the mustard decomposes, it produces an organic fumigant which controls hundreds of pests including the potato-growers' nemesis, nematodes. Lupin adds nitrogen to the soil.

Soil water crystals can help but are expensive and best for potted plants.

In autumn, most fallen broadleaf leaves (except walnut) make good compost or can be left on the surface to rot.

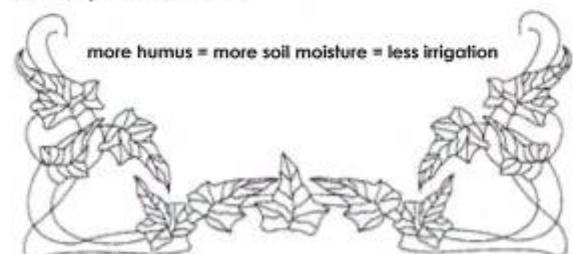
Pine needles are great for added acidity around azaleas and rhododendrons for example.

Mulch in the form of bark, sawdust, schist gravel, paper, plastic etc. will also restrict water evaporation.

Be wary

Be wary of raw sheep manure which may contain drench residues.

Straw products that break down slowly use available nitrogen as they decompose, so it's best to compost them first.



Garden Design

Simple designs can maximize plant growth.

Group similar plantings into a mini-oasis. This might be a few metres square and contain plants and lawn. A lawn with a high water requirement can be irrigated in such a setting using minimal water.

Several mini-oases can be linked by transitional areas using succulents and wattles. Plants like these need less water.

The Central Otago landscape itself offers ideas for garden design.

Thyme, California Poppy and Sedum use little water when planted out on miniature reconstructions of the dredge tailings, as do tussock grasses and native shrubs/flowers like Gentians when set among small outcrops of schist.

The Vegetable Garden

Raised beds are good both for your back and for reduced watering.

Tiles, bricks or concrete pavers between the beds will draw moisture to the surface where it can be reached by shrubs etc.

Shelter

Shelter from sun and wind is essential. Wooden slat fences and saron netting provides protection as does the natural cover offered by trees and large shrubs. Given adequate shelter, a lush, green garden in Central once established, may require very little irrigation.

If water must be used, install a suitable sprinkler system that can apply water where required at a suitable time. To reduce evaporation and allow soakage into the soil, water in the evening.

Store roof and gray-water for application to garden beds.

Do not irrigate in strong winds.