



- Before applying mulch, hoe or cultivate the ground lightly to improve ventilation.
- Use a very thin layer of dried grass clippings as a mulch in beds which have been sown with seeds, as the seeds require light and oxygen to germinate.
- Leave a space around the trunks and stems of trees, shrubs and plants (2-3cm) in order to prevent possible stem rot.
- Sandy soils need a much thicker layer of mulch than clay soils (15-20cm) as sandy soil retains less water.

- During extremely cold or dry periods, use a thicker layer of mulch. In areas with cold winters, mulch well before the first frosts. In spring, after the last frost, if needed, pull mulch back from emerging plants, especially perennials.

- As organic mulches break down, they will need to be replenished. Compost decomposes in two to four months, whereas bark chips last about two years.



- Green plant materials can cause a nitrogen deficiency if dug into the soil, e.g. lawn clippings, but can be used directly on top of the soil with confidence as long as the first layer is dry clippings or well decomposed. Do not dig it into the soil. Earthworms thrive when green plant material is added to the mulch blanket.



- Mulching of containers is important as containers dry out more quickly.



How thick should the mulch be?

For loamy soils

INORGANIC

Gravel	20-75mm
Crushed stone	20-75mm
Sand	20-50mm

ORGANIC

Wood chips	50-100mm
Sawdust	20-75mm
Shredded bark	50-100mm
Chunk bark	50-120mm
Pine needles	20-75mm
Leaves	20-100mm
Lawn clippings	20mm at a time
Straw	50-120mm

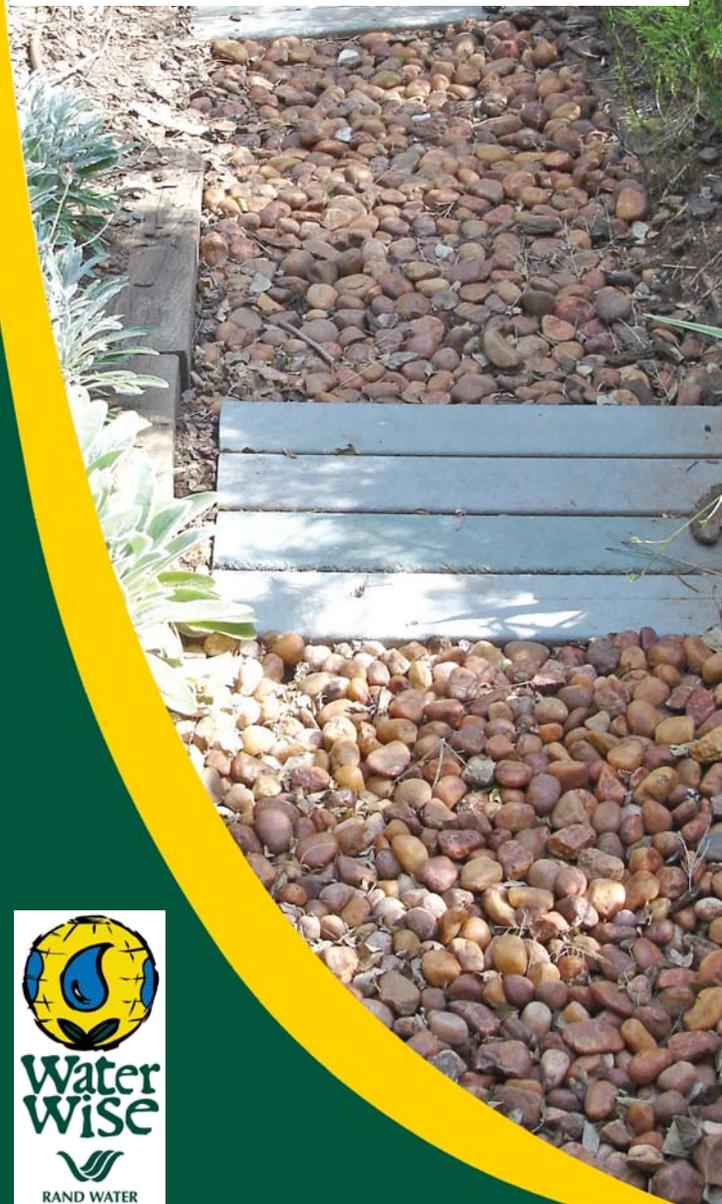
WASTE

Straw manure	50-100mm
Compost	50-100mm



For further information on Water Wise, please contact us on 0860-10-10-60 or visit the Home and Garden section at www.randwater.co.za

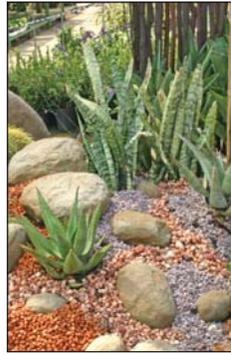
Water Wise Mulch the soil



What is mulch?

Mulch is any material that can be placed on the surface of the soil in order to keep moisture in the soil. Mulch is one of the quickest, easiest and most cost effective ways to save water in your garden. There are two sorts of mulch – organic and inorganic.

- **Organic mulches.** These come from plant and animal sources and are the best type of mulch, as they enrich the soil and improve its quality. A healthy soil is full



Examples are compost, dried grass cuttings, pine needles, chopped bark, straw, strawy manure, crushed mealie cobs, peach pips, nut shells, autumn leaves, well-rotted compost and shredded newspaper. Earthworms and other micro-organisms found in healthy fertile soil help organic mulches to break down and enrich the soil further.



of nutrients for plant growth. Organic mulches increase soil moisture and improve drainage. In addition, organic mulch regulates soil temperature (keeping roots warm in winter and cool in summer). Organic mulches break down over time, therefore they may need to be replaced (every $\pm 6-8$ months).

Examples are compost, dried grass cuttings, pine needles, chopped bark, straw, strawy manure, crushed mealie cobs,

- **Inorganic mulches.** These are materials that do not decompose and enrich the soil, but help keep moisture in the soil. Examples are plastic sheeting, gravel, pebbles, stones and river sand. Inorganic mulches can lead to an increase in soil temperature, so use them in shady areas or around low water usage plants. Alternatively, ensure the layer is thick enough.

TIP: Deciduous trees provide dappled shade to sensitive plants during summer and allow sun through during winter.

Why is mulch good?

Mulch has many benefits:

- It saves water, by reducing soil water evaporation by up to 70 %.
- It promotes good root growth by retaining moisture in the root zone.
- It reduces ground water run-off and increases water penetration.
- It helps prevent weed emergence.
- It helps keep wind away from the soil surface, so less water is lost to evaporation.
- It prevents soil erosion caused by wind and rain.
- It absorbs the impact of raindrops (preventing compaction of soil surface) and allows water to soak in more easily.
- Organic mulch reduces the reflectivity of bare soil, which cools the area around plant stems and leaves, so less plant moisture is lost through transpiration.
- Organic mulches increase soil nutrients as they break down.
- Organic mulches lead to an increase in micro-organisms and earthworm activity.
- Mulched soils do not need digging, as micro-organisms do all the work.
- An organic mulch regulates soil temperature, so less water is lost to evaporation.
- Mulch reduces soil temperature extremes in cold climates, preventing frost damage to the roots.
- In dry regions use mulch around trees and shrubs, instead of lawn and ground covers, as trees and shrubs compete with the lawns and ground covers for water.



TIP: Use mulch in difficult areas where lawn and ground covers don't grow easily.

Did you know?

A raindrop up to 6mm in size hits the soil surface at a speed of up to 32km/hr! In an experiment, soil covered with plants or mulch soaked up all the water from a rainfall, while on bare soil about 80% of rainwater was lost to run-off.

Living mulches



Plants that cover the ground are living mulches which conserve water in the soil in exactly the same way as a mulch. A living mulch allows you to have masses of colourful foliage and bright blooms at ground level.

What plants to choose

For greatest conservation of water, select evergreen low-growing and low water use small shrubs, perennials or ground covers that are Water Wise in your rainfall region.

Indigenous plants that grow naturally in your region are ideal. Use only shade tolerant plants in shady areas, sun-loving plants in hot sunny areas, and those that tolerate partial shade in semi-shaded areas. Select plants that will survive the frost levels experienced in your garden.



Water Wise ground covers



Below are some Water Wise ground covers that tolerate moderate frost (-3°C to -5°C):

Sun: Agapanthus, arctotis, campfire crassula, some vygies (*Delosperma cooperi*, *D. lydenburgense*,

D. nubigenum, *D. obtusum*), echeveria, erigeron daisy, felicia, gazania, gaura, *Geranium incanum*, dwarf day lilies, low growing lavender, trailing osteospermum, scabiosa, sedum, statice (*Limonium perezii*), creeping rosemary, wild garlic, thyme.

Shade: *Asparagus 'Sprengeri'*, hen-and-chicken, clivia, fairy crassula, low growing *Plectranthus* spp.

