

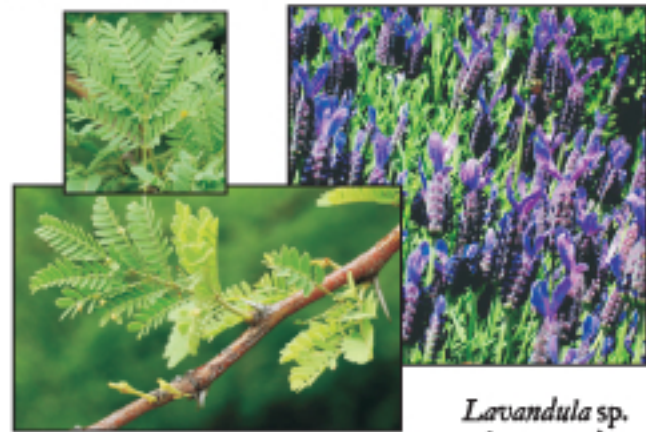
How to spot a Water Wise plant

Plants have adapted to the various climates and microclimates they occupy. Some of these adaptations are physical, e.g. cacti in low water areas have fleshy stems to store water and mangrove trees in low oxygen soils in the tidal zone have aerial roots to absorb oxygen from the air. Other adaptations are chemical, e.g. plants in high grazing areas that contain tannins which are unpalatable to animals. In gardens, you can identify plants adapted to low water conditions by specific characteristics. These include: decreased leaf size, hairy leaves, sturdy internal structures, grey foliage and succulent type leaves.



Reduced leaf size and fewer leaves

Plants with reduced leaf size have less surface area from which water can be lost through evaporation, thereby losing less water, e.g. lavender. Some plants shed their leaves during periods of drought so that moisture loss is reduced, e.g. *Acacias*.



Acacia karoo (sweet thorn)

Lavandula sp.
(lavender)

Grey or blue-green foliage

Water Wise plants often have greyish or blue-green foliage as these light colours reflect the rays of the sun, keeping the plant cool and reducing water loss. Examples include *Helicbrysums*, *Echeverias* and lavender.



Helicbrysum sp.



Echeveria sp.



Buddleja saligna (false olive)

Plants such as *Buddlejas*, *Olea africana* (wild olive) and *Gazamias* have the undersides of their leaves lighter in colour so that when it becomes too hot, they can turn this side up in order to reflect the sun's rays away.

Hairy leaves

Hairs on leaves assist in creating a microclimate over the leaf. As air moves over the leaves, the "coat" of hairs slows the air flow down, thus reducing water loss, e.g. *Helicbrysum*, *Leucadendron argenteum* (silver tree), *Stachys byzantina* (lamb's ear) and *Leucosidea sericea* (old wood).



Closing leaves

Some plants close their leaves when they are water stressed. This reduces the leaf surface exposed to the sun and decreases water loss. Examples are *Phlomis fruticosa* (Jerusalem sage) and *Cistus crispus* (rock rose).

Succulent leaves and roots

Water can be stored in different plant parts. *Aloes*, *Crassula* and vygies store water in their thick, fleshy leaves while *Agapanthus* and *Clivias* have succulent roots for water storage. They also have strong, deep root systems able to reach water deep in the soil profile, which allows them to survive long periods without water.



Aloe sp.

Vygie sp.

Agapanthus
sp.



Waxy leaves

A waxy coating on the leaves also reduces moisture loss from plants. Examples of such plants include *Kalanchoe* sp., *Ficus* sp. (wild figs) and Indian hawthorn.

Dormancy

To survive the dry season, some bulbous plants survive by becoming dormant and going underground. Examples of such plants include certain *Watsonia* species, *Crinum* and *Amaryllis* species.