

actsmart[®] microclimate

The aspect, amount of sun and shade in your garden, dominant wind speed and direction, and land slope all work together to create your microclimate. Your garden's microclimate is also affected by buildings, walls, fences, the placement of hard surfaces such as paving, paths or roads that may radiate extra heat, and trees, shrubs and windbreaks.





You can make your garden more efficient by understanding:

- how your garden features create microclimates
- how to use your garden features to your advantage
- how to modify your garden features if necessary.

Each microclimate provides different growing conditions for plants. Plants that are matched with the microclimates that suit them will be healthier and more vigorous.

Site aspect

The position of the sun in each season and the patterns of sun and shade at different times of the day will have a major impact on plant choice and water use.

North-facing

As a general rule the northern side of your house will be sunnier, warmer and more exposed to the elements, making this a good place for low water-use plants. North-facing solid walls are a valuable spot for growing plants which usually don't tolerate heavy frosts, as the radiant heat emitted from the wall keeps them warmer through winter.

West-facing

Western facing sites endure hot afternoon sun in summer, along with strong hot winds. This space is best suited to plants which occur originally in hot, dry conditions such as plants occurring in the Canberra region, west of Australia's Dividing Range, as well as some plants from Mediterranean climates, and southern parts of America and Africa.

South and East-facing

While the south side of your house sees no sun through winter it is not protected from the hot summer sun, so this site is suited to plants which can handle seasonal sun but will tolerate no direct sun through the colder months. East-facing sites are useful for planting species which need protection from hot afternoon summer sun and strong, hot winds.

Using shade

Design your garden to create natural shade by:

- Using trees, shrubs, windbreaks, climbing plants, pergolas and screens to provide shade for the garden and outdoor living areas
- Planting large trees that provide their own shady microclimate. Deciduous trees can be useful on the north side of the house to provide summer shade and will let in winter light and warmth
- Planting shade or semi-shade tolerant plants on the south or south-eastern side of the house.



Wind

Northerly and westerly aspects can be particularly exposed to these hot, dry summer winds. In winter exposure to the cold southerly winds can mean your garden is vulnerable to frosts and wind burn.

Windbreaks can moderate the effect of wind and help reduce your overall water needs.

In Canberra gardens windbreaks to the north and west protect your garden's plants from hot summer winds.

If living windbreaks aren't possible, use screens, shade cloth or pergolas to shelter plants.

Slopes

The topography and slope of your block will influence the microclimate by affecting drainage patterns and available soil moisture, and exposure to seasonal sun and wind.

North and west facing slopes receive more direct sunlight and are more affected by summer winds than south facing slopes. South facing slopes are more affected by cold winter southerly winds.

You can turn slopes to your advantage by placing higher water-use plants in garden beds at the bottom of sheltered slopes.

On steep open slopes, use low water-use plants which occur naturally in dry, exposed environments.

You can deliberately contour a garden to redirect run-off from paths or driveways to where it is needed, or slope paths towards garden beds. Terracing can help prevent water wastage on sloping blocks. Avoid planting lawn on slopes as this can lead to water loss from run-off.

Hard surfaces

Large areas of hard surfaces can create hot spots that require additional water.

To minimise this effect, choose light coloured paving (and walls) that absorb less heat. Making paved areas more permeable to allow rain to seep into soil and nearby plant roots can help save water. Create paths from organic material such as woodchips or bark mulch, rather than using hard surfaces.

Groundcovers as "living mulch"

Groundcovers can be used to reduce overall water loss from the soil by reducing the impact of wind and sunlight as well as creating a useful root cooling environment for surrounding plants.



For more ideas, tips and information
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