

1. Basic tips in plant selection
2. What helps plants to conserve water?
3. Grey Plants
4. Water wise substitute plants
5. Why plant ground covers
6. Why plant annuals?
7. Why plant bulbs?

1. Basic tips in plant selection

- Careful consideration must be given to the species (type), size and condition of the plant, before selecting it.
- Indigenous plants offer a range that are most suited to our dry conditions in South Africa and should therefore cope better during periods of prolonged drought. Some indigenous plants originate from areas that receive a very high rainfall and should therefore only be utilized in or around a water feature or in the high water use zone.
- Plants for the sake of plants have become a luxury - plants must be selected to serve specific functions.
- Grow plants that are adaptable to the site rather than water more to make up for the stressed condition the plant is experiencing due to this incompatibility.
- Use indigenous plants (local to your area) as they are normally most suitable to cope when conditions are dry.
- Exotic plants can also be successfully used in each water zone in the garden, but care must be taken to match the water requirements of each plant in a zone.
- Group plants to create dormant areas for example: deciduous trees with highveld bulbs which could be covered by attractive mulch during the dry winter season/period. All highveld plants particularly bulbs tolerate similar water regimes.
- In the hot dry areas, mostly drought resistant plants are required. Select those which tend to be succulent like, or have thick waxy cuticles or grey foliage or are covered in fine hairs, to achieve the best results. An example being *Lavendula spica*.

- Beware of exotic invader plants.
- Use hard landscape materials to replace some plants. Decorative logs in difficult areas solve many headaches and create artistic features in the garden.
- Selecting fewer plants in the landscape uses less water and is lower in maintenance. Often simple plans are more pleasing than a crowded appearance.
- Avoid planting masses of annuals rather group them in selected spots which are focally positioned. Alternatively use colourful perennials.
- Avoid planting annuals as borders around hardy shrubberies. They require more regular shallow watering compared to the shrubs that require heavy thorough watering less often.
- Most annuals are best suited to the high and medium water zone - for more information on zoning refer to DESIGN (1).
- Attractive plants that cope with the climate in your area can form a sustainable bulk structure in your garden.
- Plant water thirsty varieties in smaller grouped areas as focal points. (Examples *Acanthus molle*, *Zantedeschia* spp)
- Focal points create interesting areas in the garden. They help to draw you into the garden. They are most effective when they contrast with the bulk of the garden. This will keep maintenance and water usage under control.

2. What helps plants to conserve water?

- Hairs on leaves and stems.
- Waxy cuticle (mainly on leaves).
- Bulbs and tubers.
- Dormancy at certain times of the year.
- Leaf size and shape. (Smaller leaves and digitate or palmate leaves)
- Underground stems such as *Erythrina zeyheri*.
- Reduced plant size (example low growing *Indigofera* spp and *Hebe* spp).
- Fleshy leaves (such as aloes).

- Closing leaves.
- Rolling leaves.
- Plants with lighter colour undersides (such as *Buddleja* spp and *Olea europaea*).
- Bipinnate leaves in sun (such as *Acacia* spp).
- Flaking bark (some indigenous *Acacia*'s and *Heteromorpha trifoliata*).
- Sunken stomata.
- Volatile oils (such as *Lavendula* spp, and *Eucalyptus* spp).
- Sturdy internal structures.
- Very thick layers of bark (*Quercus suber*, and *Pinus* spp).
- Grey leaves in the sun (example *Lavendula* spp, *Artemisa* spp, *Phlomis* spp. One leaf shades the other below.

3. Grey Plants

- Plants with grey foliage are often very hardy. Hardy plants are ideal for low water zones in Water Wise gardens.

Importance of grey plants in the garden.

- Reflect light and is therefore cooler.
- Contrast against green in design.
- Creates a focal area through contrast.
- More impact to plants of other colours e.g. red = more red.
- Assist to colour coordinate different colours (blend).
- Generally these plants don't require large amounts of water, therefore can easily be used in medium to low water zone.

What goes with grey?

- Hair on leaves and stems.
- Rough "leaves".
- Serrated leaves.
- Bi-pinnate leaves.

Shades of grey

- By taking note of the different "shades" of grey available in many plants, it is possible to create harmony and rhythm throughout the garden.
- Fennel – bright green grey; brown grey.
Lavender - grey.
Centoria cineraria – white grey.
Hebe - green grey

4. Water Wise substitute plants

- Water Wise plant selection relies on finding the hardest, best performing species. Secondly one needs to find hardier alternatives for those plants that can potentially waste water when placed in the wrong positions.
- High water vs. Medium to low water plants.
- *Azalea* vs. *Bougainvillea*.
- Tree fern vs. Cycad.
- Annuals vs. Perennials
- Old English vs. Sensation Iceberg [roses].
- *Acanthus molle* vs. *Melianthus major* .
- *Begonia* vs. *Impatiens*.
- Arum lily vs. *Hosta*.
- *Coleus* vs. *Acuba*.
- Peace in home vs. *Dichondra repens*.

5. Why plant ground covers.

- Ground covers cut down on maintenance by reducing weed regrowth.
- Try not to mix too many varieties as this could become untidy and water requirements of each may differ. Simple effects are most attractive.
- Ground covers help to define space on the horizontal plane. By defining space they also help to lead the eye around the garden.
- They give the garden a finished look i.e. a look of being established.
- Ground covers can link bigger shrubs in a bed giving unity to the design.
- Ground covers can contrast with shrubs, helping to create focal points e.g. *Othona capensis* around the base of conifers.
- Ground covers can be used to create depth - by using dark foliage under shrubs and tree e.g. *Vinca* and *Hedera* (Ivy) not the variegated ones.
- Ground covers can be used to lighten up dark areas for example variegated ivy, *Vinca*, and *Lamium*.
- Ground covers can make things look closer e.g. by choosing a ground cover with light foliage in foreground e.g. *Serastium tomentosum*, *Stachys byzantina*, *Senecio cineraria*.
- Ground covers can help to stop soil erosion by holding the soil during rain and wind.
- Ground covers help in creating atmosphere and themes e.g. a creeping *Gazania* in a sunny position gives the feeling of

"Namaqualand", or *Carpobrotus* with white sand underneath could create a coastal feeling.

- Ground covers help to slow water down when it runs over them. This enables the soil to receive more water. All plants in the area benefit.
- A ground cover can complete a bed without the view being blocked as occurs when you use shrubs.
- Ground covers help to link the horizontal plane to the vertical plane of bigger plants. It creates a base for the eye to look at whilst focusing on taller plants e.g. palms on their own look fragmented, while having a ground cover at the base, links them together.
- Ground covers improve the aesthetic value of design by adding finish.
- Ground covers can be used in small areas such as a courtyard. Here a ground cover is used to give variety and takes the place of other shrubs that are too big. It is able to reduce the scale of the garden.
- Ground covers can be used under mass planting to show off the plant above e.g. a blue ground cover (*Convolvulus* and *Ajuga*) will display orange flowers (*Hemerocallis*, tiger lilies, *Kniphofia* and *Gladioli*) above very well.
- Ground covers can often be planted over areas where other plants will not grow e.g. on a very stony, poor soil. (*Mesembryanthemum*, *Sedums*, *Kalanchoe*, *Optunia cordata*).
- Ground covers constantly enrich the soil with organic matter such as leaves dropping and roots being renewed.
- Ground covers help to soften the floor plane of the environment - softer than paving or gravel.

6. Why plant annuals?

- To obtain instant colour.
- To have a section of the garden that continually changes.
- To give a feeling of freshness to the garden.
- For improved perfume in the garden.
- For flowers in the house.
- To enhance a focal point (high water zone).
- To use in a container.
- To add detail and interest to the design.
- For butterflies and birds in the garden.
- To create contrast in certain areas.

Design considerations for annuals

- Avoid planting masses of annuals haphazardly; rather group them in selected spots which are focally positioned.
- Alternatively use colourful perennials. Avoid planting annuals as borders around hardy shrubbery. They require more regular shallow watering compared to the shrubs that require heavy thorough watering less often.
- Do not plant the whole garden with only annuals as this is extremely seasonal and could waste lots of water.
- Do colour co-ordinate your choice of plants with the garden design.
- Do make sure of height, spacing and soil requirements of annuals before planting.
- Do make sure whether they are sun or shade loving.

7. Why plant bulbs?

- They have a fleshy bulb that helps them become hardy and are good Water Wise choices.
- There is such a large selection of bulbs to choose from to give a reliable show of colour e.g. there are 1 300 species of the family *Amaryllidaceae* in the world. 220 species occur in South Africa.
- Species such as *Narcissus* spp., *Crinum* spp, *Amaryllis* spp, *Boophane disticha* and *Amacharis* are a few of the more well known gardening choices.
- There are 1 500 species of the family *Iridaceae* in the world of which 880 occur in South Africa. A few of the more well known species include *Watsonina* spp, *Dietes* spp, *Gladiolus* spp, *Moraea* spp, *Homesia* spp and also *Crocus sativas*.
- Their foliage is hardy and gives extra texture and line to the garden.
- They are easy to propagate by splitting which makes them cost effective.
- They must be planted in their correct micro climate, sun, shade or bog areas for the best results.
- Bulbs are very suitable for perennial water courses; they hold the soil down, slow down the water helping it to penetrate into the soil.
- South African bulbs are mostly summer flowering and they benefit from the summer rain in these water courses.

- The dormant period in a bulbs life cycle, allows for seasonal change in the garden and reduced water use.