

1. Lawn in South Africa
2. What type of lawn do I select and how to use the least amount of water?
3. Why plant ornamental grass and grass type plants?
4. The do's and don'ts of lawn watering

## 1. Lawn in South Africa

- In most South African gardens, lawned areas make up a large portion in the garden. By reducing the amount of lawn area or by replacing some lawn with either hard surfaces or ground cover some water can be saved. This is by no means a drive to do away with lawned areas completely, as they are extremely important for recreational activities.
- Where possible avoid cool season grasses. Select indigenous, hardier varieties for example: (Tifwolf) LMG which is a low maintenance grass requiring less mowing, or other *Cynodon* (Kweek) species, *Phyla nodiflora* (Matgrass or Carpet Grass).
- Reduce the mowing height of lawns to decrease the water use rate.
- Frequent cutting of lawn reduces stress. Cutting the lawn down by more than one third also causes undue stress.
- Avoid watering of lawns during winter months, until well into the next rainy season.
- Give lawn the lowest priority of any landscape/garden because they are slower to die, recovers easily and are usually less expensive to replace than other vegetation types.
- Use hardy groundcovers rather than lawn in difficult areas, or consider ornamental mulches in very difficult area for example; *Gazania* sp.

## 2. What type of lawn do I select and how to use the least amount of water?

- Cool season grasses have a different metabolism and will use more water than a warm season grass, cool season grass use as much as 12.5mm of water a day compared to a warm season grass which vary between 2.5 - 7mm of water use per day.
- Lawn must be suitable to the area. Climate/size shape of the area.
- Only water lawn, as required i.e. just as signs of dryness or leaf stress (leaf curl) set in. Some grasses such as *Cynodon* start to turn a blueish colour when they need water. Another sign that grass needs water is when you stand on the grass and footprints remain for a few minutes thereafter.
- Don't over-water lawn as fungal diseases may occur resulting in poor growth.

### In summer water as follows:

- Cool season grasses such as All Season Evergreen and Shadeover need to be watered for 2 minutes daily and receive 1mm every day for 6 days and on the 7th day to apply 19mm of water.
- Other grasses such as Golf Green, Bayview, (*Cynodon* species) need only to be watered once a week for 20 - 30 minutes and receive 20-25mm of water.
- (N.B. Place a rain gauge on the lawn to assist with this process.)
- Allow lawns such as Kikuyu, 20-25mm of water once a week.

### **In winter water as follows:**

- Reduce all watering quantities by half and water cool season grasses weekly. Cynodons and Kikuyu every second week.
- Cutting height of lawns is directly proportional to the amount of water a lawn uses. For the above recommendation the cutting height should be: cool season grasses 40mm in sun and 60mm in shade, Cynodon species 7mm and Kikuyu 15mm in height.
- To improve clay soils, hollow tine the lawn and replace the cores with a good mix of compost and river sand. This allows some water to remain and improves drainage of excess water. Gypsum (agricultural lime) can also be used if dug into the soil. For more information refer to SOIL (2).
- Sandy soils are best watered in small amounts more often. Clay soils are best watered in larger amounts less often. Use cycling as a method of watering.

### **3. Why plant ornamental grass and grass type plants?**

- Ornamental grasses are a natural choice for Water Wise gardens because; they not only require little water (if well chosen for the site) but also little maintenance. They need no deadheading (removal of spent flowers to promote continued bloom) or mowing, they are very pest and disease free, and too much fertilizer causes them to grow too quickly, spread in search of nutrients and die out in the middle. They accommodate a wide range of soil and climatic conditions.
- Grasses are one of the most successful plant families in the world. There are grasses in nearly every environment, from hard baked desert to soggy marshes, from the tropics to the Polar Regions, from the seashore to the highest snow covered mountains. Grasses are therefore available for each water zone in the garden.
- There are over 10 000 named species of grasses in the world and except for ones that are commonly considered weedy invaders of turfgrass, many of them when viewed individually make lovely ornamental grasses. This is where an appreciation of indigenous species comes into play. The grasses that have

flourished unnoticed and neglected in abandoned areas, roadsides and waste places may look elegant sorted and massed in your landscape - and their seeds are free and easy to gather.

- In general, species from the family *Gramineae* (true grasses) will be the most drought tolerant, or will be found in the driest regions of the world. Their needs are simple - just fertile, well drained soil in an open, sunny location. Bamboos and the grasslike plants in the *Carex* (sedges) and *Juncus* (true rushes) genera, in that order, need progressively more moisture in the soil. The *Luzula* genus (woodrushes) and *Typha* is more adaptable, tolerating wet soil next to a stream and some drought if established in rich soil under trees. Using grasses in the garden allows for any type of design, from formal, to cottage, to symmetrical, to indigenous, and to wild and natural. Most grasses especially the smaller varieties such as *Ophiopogon* should be planted in groups and not as single plants. To focus on contrast, place with other plants of larger leaf size or colour. To enhance the effect of grass, plant large groups of different types in a similar bed or area.

### **Site consideration:**

- Do make sure the grass is correctly chosen for its own micro climate.
- Do plant ornamental grass for texture, line and architectural elements.
- Do plant extra wild ornamental grass for birds and insects in your garden.
- Do trim back grasses once a year if required.
- Do be aware of water "grasses" with creeping stolons in pools with plastic lining as they can create holes and leaks.

### **4. The do's and don'ts of lawn watering**

- Lawn watering greatly depends on the variety and the application of lawn. Kikuyu highly maintained will need more water than indigenous *Cynodons*, as they have the ability to withstand drought. A natural meadow could survive on rain water but a golf green needs daily watering. Golf course greens are under huge amounts of stress due to traffic and the short height they are maintained at. The quick draining soil media that are used add to the problem as they don't hold water

available to the lawn. It is for this reason that these lawns often need to be cooled during the heat of the day. In these cases the lawn is lightly sponged with water and not drenched as most of the water will evaporate. Too much water can ruin a lawn just as fast as too little water.

- There are 2 ways to tell when a lawn needs watering.
  - Firstly, there is a colour change and the grass takes on a subtle bluish tinge.
  - Secondly, the grass doesn't spring back when it is walked on and foot prints are still visible 2 minutes later.
- Lawn, that is severely water stressed, may develop straw coloured patches and need additional watering to recover.



### **Practice cyclic watering for soils with poor penetration**

- Let's say we are using a cone sprinkler with a high precipitation rate (20-30 mm/hr). It is left on for 10 minutes and then turned off for 20 minutes. After this it is turned on for another 10 minutes and then off again. The process can be repeated three or more times.
- Never water past the point of runoff. If water is running off the surface, move the hose to another location, or turn it off. This allows time for the water to soak down into the soil.
- The first cycle will water the soil to a certain depth but each subsequent cycle will water deeper into the soil while still avoiding runoff. The length of cycle will depend largely on soil type and slope.

### **Some other tips for saving water and maintaining a good lawn**

- Use a screwdriver to test the depth of watering. The screwdriver will penetrate the soil more easily when moist.
- Don't compact lawn by parking cars on them.
- Don't cut the grass below 4 cm in height or more than one third at any time because this reduces root depth, causing stress on the lawn.
- Aerate the lawn in spring or early autumn by pushing a garden fork into the soil (preferably when wet) at a spacing of 25 mm and a depth of 100 mm. There are commercial machines available to do this.
- Check your lawn for thatch. This is an accumulated layer of dead material at the base of the turf that can reduce water infiltration. If necessary de-thatch the lawn in spring. This can be done with a garden rake, but for best results use a commercial machine.