

- Weather—the hotter it is the more the irrigation is required.
- Position—sunnier areas dry out more quickly and also need more frequent irrigation.
- Soil type—sandy soil dries out quickly so it needs more frequent irrigation

The lawn should be irrigated twice a day in the early morning for approximately 10 minutes (4 to 6 mm). Puddles must be avoided because they indicate saturation of the soil and lack of oxygen to the roots. Topsoil at 2 cm must stay moist until the plant develops a root system.

### Weed control

It is best to spray the existing grass with a registered weed chemical before planting. This type of herbicide normally kills anything green, so be careful when spraying. Wait for a week or two for the grass to be completely brown before removing. It may need to be sprayed more than once. Dead grass should be removed.

### Pest and disease control

Lawn grub is one of the pests causing damage if populations climb too high. Prevention is the key but treatment may be necessary.

Diseases like dollar spot, powdery mildew, fairy rings, mold and red thread are the most damaging in the lawn grass family. Keeping the lawn healthy can ease the pressure of lawn disease.

### Uses

It is used for instant lawns, sports field, golf course construction, rehabilitation of environmental surfacing and in-house design.

melon mosaic virus are common diseases found in cucumber production. Silver reflective plastic mulches applied at planting have been shown to be effective in repelling aphids from plants, thereby reducing or delaying virus infection.

### References

- www.lawnchemicare.co.za Kikuyu lawn grass, accessed December 2014
- www.sakata.co.za All seasons evergreen, accessed October 2014
- http://www.utextension.utk.edu Lawn grass maintenance, accessed on October 2014
- www.wikipedia.org/wiki/Lawn\_utilization, accessed October 2014



Further information can be obtained from

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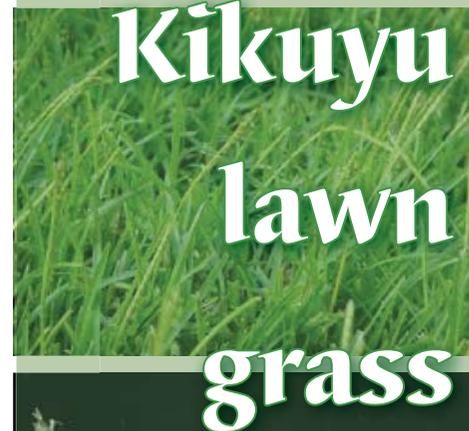
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Scientific name: *Pennisetum clandestinum*

Common names: grass; bjang; utshani; turf; pitch; field or green

## Background

Kikuyu is widely adaptable and performs well in most parts of southern Africa. It originates from the east African highlands and requires high light intensities to survive.

Less than 50 of more than 10 000 individual species of grasses are classified as turf grasses. The turf grasses usually become compact and dense when routinely mowed. Unlike many trees that produce new growth from apical meristems at stem tips, turf grasses, create new cells in locations below the tip. Sub apical meristems at the junction of the leaf blade and sheath, at the base of the leaf sheath and in buds on nodes near the soil surface to enable turf grasses to tolerate mowing.

## Production areas in South Africa

Gauteng, KwaZulu-Natal, Limpopo, Eastern Cape and Western Cape

## Description of the plant

### Mature plant

*Pennisetum clandestinum* is a rhizomatous grass with matted roots and a grass-like or herbaceous habit. Grasses are monocots and as the name implies, they have only one seed leaf or cotyledon.

### Leaves

Additional leaves develop in a two-ranked arrangement, with each successive leaf attached at a 180 degree angle from the previous leaf.

The leaves are green, flattened or upwardly folded along the midrib, 10 to 150 mm long, and 1 to 5 mm wide. The apex of the leaf blade is obtuse.

### Essential parts

The leaves are the most essential parts.



## Climatic and soil requirements

### Temperature



Turf grass seed germination and growth are restricted to a specific range of temperatures. Turf grass species are broadly categorised as warm-season grass (27 to 35 °C) or cool-season (16 to 24 °C), depending on the temperatures at which they thrive. Creeping bent grass, kentucky bluegrass, ryegrass and the fescues are cool-season grasses. They are best adapted to air temperatures from 16 to 24 °C. Warm-season turf grasses, including bermuda grass, centipede grass, St. Augustine grass and Zoysia, grow best at air temperatures from 27 to 35 °C. Warm-season turf grasses lose their colour and are dormant during cold winter months.

### Rainfall

As lawn requires a large amount of water, sufficient rainfall would be needed to maintain the grass's health. Grass typically goes dormant during cold winter months, and turns brown during hot, dry summer months, therefore its water requirement is reduced.

### Soil

Loam soil is best as it encourages the lawn's roots to grow deeper in the soil than the poor soil structure would.

## Cultivation practices

### Propagation

There are two types of turf propagation, namely, by seed and vegetative methods. Vegetative propagation methods include turf grassing, sod, plugging, sprigging and stolons. The seeding method can take longer to establish than the method of turf grass propagation, which is also done vegetatively.

### Soil preparation

According to (Sakata seed company, All seasons evergreen), if the soil is dry, the area should be watered thoroughly a day or two before beginning with soil preparation. Super phosphate fertiliser should be spread at a rate of 50 g per m<sup>2</sup> over entire area. This a general recommendation made in the absence of a soil test. The area where super



phosphate is over incorporated to a depth of approximately 15 cm should be dug.

The clods should be broken to create a fine seedbed. A balanced fertiliser such as 5:1:5 or 3:1:5 at 30 g per m<sup>2</sup> should be spread and raked into the surface of the soil. Checking levels by rolling the area lightly and then filling in any hollows is important.

### Planting

Early autumn, spring and early summer are the primary seasons to seed, lay sod (turf), plant "liners", new lawns, when the soil is warmer and air cooler. Seeding is inexpensive, but takes longer for the lawn to be established. Aerating just before planting/seeding promotes deeper root growth and helps thicken turf. About 30 to 50 kg of lawn seeds can be applied per hectare (ha).

Sodding provides an almost "instant lawn", and can be planted in most temperate climate areas in any season, but is more expensive and vulnerable to drought until established.

Hydro seeding is a planting process that uses slurry of seed and mulch. It is a quick, less expensive method of planting large, sloped or hillside landscapes. Some grasses and sedges are available and planted from "liner" (100 mm) containers, from flats, and are planted apart to grow together.

### Transplanting

Seedlings are usually grown in containers and transplanting is done when the seedlings reach length of 15 cm.

### Fertilisation

The general fertilisers recommendations of turf grasses are 3:1:1 (NPK). They also contain essential micro-elements nutrients like calcium (Ca), magnesium (Mg), sulphur (S) and minor boron (B), chlorine (Cl), copper (Cu), iron (Fe), manganese (Mn), molybdenum (Mo) and zinc (Zn). The fertiliser label contains information regarding the nutrient content of the product.

### Irrigation

A number of factors influence the amount of water required in early stages. These factors include:

