

Suitable Lawn Grasses for the NT

A. G. Cameron, Principal Agronomist Pasture Development, Darwin

TYPES OF LAWNS

The type of lawn to establish depends on the needs of the owner and the time available for establishment, care and maintenance. The type and quality of lawns range from rough turf such as roadside cover and the median strip, through to playing fields, nature strips, home gardens and, ultimately, bowling greens.

SUITABLE SPECIES

Bahia grass (*Paspalum notatum*) is an outstanding low maintenance species for lawns in the tropics. It is less susceptible to lawn grubs than other available grasses. It forms a coarse textured, open and tough lawn. The leaf is hairy, although sometimes only on the edges. The hairs can cause skin irritation on contact, when for example children roll on the lawn. The species is adapted to a wide range of soil types, from sands to clays. It prefers slightly acid soils; it is tolerant to a moderate degree of immersion, but does not tolerate salinity. The root system is deep and extensive. The grass can survive extended periods of drought and is moderately fire-resistant. It is well suited for areas where irrigation is not available in the dry season as it 'greens-up' rapidly when it rains or when it is watered.



Figure 1. Darwin hairy paspalum

Bahia grass is widely used on roadsides, ovals and for lawns in Darwin and Katherine. The available cultivars include:

- *Argentine* which is a low-growing variety with smooth, broad leaves. It is the preferred variety for seeding lawns.
- The Darwin strain is a low-growing variety with hairy, broad leaves. It is sown by runners as seed is not harvested locally. It usually forms a denser lawn.
- *Pensacola* is an erect, taller variety with smooth, thin leaves which should be avoided where possible because of its yellow/green appearance, and poor covering ability between sown rows.



Figure 2. A paspalum lawn in a park

Queensland blue couch (*Digitaria didactyla*)

This is a good grass for use in tropical Australia. Most of the turf sold commercially in Darwin is Queensland blue couch. The grass has a distinctive rich bluish colour. When well grown, it forms a dense mat that resists weed invasion. It has only a fair tolerance to shade but tolerates high humidity. It is not recommended for shaded or low maintenance areas. Blue couch has poor resistance to both drought and disease. It requires regular watering in the dry season in the Top End to avoid an extremely parched, dried-out look. A moderate level of fertiliser, regularly applied, is necessary to have it at its best. A blue couch lawn can readily develop thatch if not correctly managed. Although it produces seed, normally seed is not commercially available and propagation is vegetative. Because of its rapid spread, the use of small sprigs or sod pieces is satisfactory. It is best suited to lighter sandy or medium textured soils. Blue couch is susceptible to attack by army worms.

Blue couch has been used successfully in Darwin and other coastal areas for household lawns and for intensive use on golf fairways, golf greens and bowling greens.

Green couch, Bermuda grass (*Cynodon dactylon*, *Cynodon* spp.)

Green couch is one of the most important and widely distributed warm season turf grasses. Common couch is the only one of the group that can be propagated by seed, but it is the least attractive turf type. Green couch is adapted to a wide range of soil types but grows best on sandy loams and loams. It is highly tolerant of saline conditions, flooding and saline or alkaline water. Green couch requires a moderately high level of culture and fertility, including some periodic spraying for the control of lawn grubs. With moderate care it can be an excellent lawn species, particularly when improved types are used.

Improved types developed in the USA or Australia include *Tifgreen*, *Tifdwarf* and *Greenless Park*. All of these are superior to common couch for a lawn, but must be propagated vegetatively. Cover can be quite rapid after establishment.

The main use of this species in the NT is for golf and bowling greens.

Carpet grass (*Axonopus affinis*)

Carpet grass forms a coarse textured, fairly dense low-growing turf with a distinctive pale green colour. Other distinctive characteristics include a compressed creeping stem and blunt or rounded leaf tips. It is generally quite shallow rooted, and relatively intolerant of drought. It is best adapted to acid, sandy or sandy loam soils of low fertility. Carpet grass prefers moist, well-watered soils, but not water-logged conditions. It does not tolerate saline conditions and is susceptible to lawn grubs.

It is a species for low intensity, poorer quality turfed areas. In Darwin it has been mainly used on and around sports ovals

There is no named cultivar, but seed is available.

Broad leaf carpet grass (*Axonopus compressus*)

Broad leaf carpet grass forms a coarse textured, fairly dense low-growing turf with a distinctive dark green colour. The green leaves have a shiny, waxy appearance, with crinkles in them. It is generally quite shallow rooted, and relatively intolerant of drought. If it dries out during the dry season, and then when it rains or it is watered, the older leaves die and do not green up. This gives the lawn a half green – half dead appearance. It is best adapted to acid, sandy or sandy loam soils of low fertility. Broad leaf carpet grass prefers moist, well watered soils, but not water-logged conditions. It does not tolerate saline conditions and is susceptible to lawn grubs.



Figure 3. Broad leaf carpet grass

Broad leaf carpet grass is however quite tolerant of shade, being one of the few grass species suitable for use in the NT in areas of 50% or more shade. It grows well in shade when established, but does not establish well in shaded areas. The grass should be established before the area is shaded by trees and shrubs.

Broad leaf carpet grass is the most widely used grass in shaded areas in the Top End. No named cultivar is available. While it produces seed, it is not commercially available. Lawns must be planted with runners or cuttings.

Manila grass, Zoysia grass (*Zoysia matrella*)

Manila grass forms a uniform, dense, low-growing, high-quality turf. It has a slow growth rate, which can be a problem during establishment, but becomes an advantage when established. It is useful for high use, low maintenance lawns and play grounds.

Manila grass has excellent drought and high temperature hardiness and excellent tolerance to wear, although its recovery rate from damage is slow. It will tolerate moderate shade, particularly if full sunlight is available for part of the day. When the grass suffers from drought or physical damage, such as driving on it, it will die. Ideally, the soil should be fine-textured, slightly acid and fertile. It will not survive in poorly-drained or wet soils. Manila grass has good salt tolerance and can be used in exposed seafront areas that are not suitable for Bahia grass.

The stems and leaves are tough and stiff. For best results, it should be mowed with a reel mower. Failure to do this can cause scalping and leave unsightly brownish patches. Its high lawn density enables the grass to strongly resist invasion by weeds when established. Thatch can be a problem. Reduce this problem by mowing regularly at a low cutting height. Vertical mowing may be necessary every few years to ensure that the thatch is removed. Lawn grubs can be a problem in stressful periods.

Kikuyu (*Pennisetum clandestinum*)

Kikuyu grass is a useful lawn species in Tennant Creek and Alice Springs where temperatures are lower during the dry season, but cannot be recommended for the Top End, where it does not persist.

Kikuyu grass is a low growing, aggressive perennial that spreads by leafy, thick creeping rhizomes and stolons to form a dense, tough sod under close mowing. It is reasonably tolerant of both drought and high temperatures and moderately tolerant of the low temperatures experienced in the cooler months at inland centres. It is moderately shade tolerant. It is very tolerant of heavy usage, primarily due to its rapid recovery. Medium to light-textured soils are preferred, although it is reasonably tolerant of poor drainage. Regular applications of nitrogen are required to avoid a yellow-green appearance, but this also accelerates the presence of thatch, causing the lawn to be spongy and difficult to mow.

While there are named varieties such as Whittet and Breakwell which are sown by seed, the common form, which is not fertile and is sown vegetatively, is preferred for lawns due to its denser growth. Although it must be sown vegetatively, it achieves cover quite quickly.

OTHER SPECIES

There are some other species which are used locally as turf. These include:

Indian bluegrass (*Bothriochloa pertusa*)

Indian bluegrass is a low-growing pasture grass which can be used for lawns. There have been extensive sowings for lawns in Katherine. It is naturalised as a lawn grass on nature strips and some regularly mowed seafront areas in Darwin. Indian bluegrass prefers heavy clay soils and frequent low mowing.

Late flowering varieties are available as seed commercially but most garden sowing is done vegetatively.

Saltwater couch, Saltine (*Paspalum vaginatum*)

Dwarf turf types of this species have been used in inland areas, particularly around Alice Springs. It is highly tolerant of saline conditions or saline irrigation water. It is similar to common green couch in leaf size and shape, but is usually greener. It should be mowed regularly because if it is left to grow too long, mowing will cut it back to unsightly brown stems. It is a warm season grass which shows little growth in the cooler months. An application of nitrogen assists with winter greening. It must be vegetatively propagated. Spread by both rhizomes and stolons is quite rapid in the warmer months.

A commonly available variety is *Sunturf*.

Sweet smother grass (*Dactyloctenium australe*)

This is a soft, coarse leaved lawn grass now available from some turf suppliers in southern States, but is not available in the NT. It is highly shade tolerant. Only small areas have been sown in the NT.

Buffalo grass (*Stenotaphrum secundatum*)

Buffalo grass, also known overseas as St. Augustine grass, is a tropical and warm temperate grass with cold and frost tolerance. It tolerates short-term flooding and salt spray, but does not persist where there is a prolonged dry season, unless watered. It is tolerant of shade.

It is a moderately coarse lawn species. Buffalo grass is usually planted by runners, but turf has been available in Darwin in recent years.

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