

GC 15- GRASSES FOR COURSES

Although there are more than 7000 species of grasses on this planet of ours only about two dozen of them are suitable for planting on a bowling green and still fewer available in South Africa. The main requirement being that the grass must be capable of forming a contiguous mat which covers the whole green and be able to cope with heavy traffic.

There are some very suitable indigenous grasses and our bowling population is too small to justify local hybridisation as a commercial proposition. Our research facilities at the Universities are more geared to doing DNA profiling of new indigenous species sent from different parts of the country for assessment and comparison with existing established species.

Apart from *Paspalum* belonging to the sub-family *Panicoidea* all the grasses successfully planted on bowling greens in the RSA belong to the sub-family *Eragrostoideae* – Genus *Cynodon*

A **Panicoidea**__ Genus *Paspalum*

- Warm season perennial grass.
- Does not appear to produce viable seeds and must be propagated vegetatively.
- After planting thick stolons will appear. Vigorous verticutting or division of these stolons will result in many individual plants making a contiguous mat
- Hardly any lateral growth
- Very well-developed root system which retains 15 % more water than any other bowling green grasses.
- Leaves are very flexible and do not divert or obstruct the passage of the bowl
- *Paspalum* has no nap or grain and the bowl will turn (or draw) more sharply.
- Tolerant to extreme salinity (it will survive in sea water).
- *Paspalum* should not be mown at less than 4.00mm.

Successfully planted anywhere in the RSA but has a longer dormant period in frosty areas. Must be the first grass of choice in areas where salinity of the soil or water supply is a problem

Species

- 1 *Paspalum Vaginatatum* – Originally known as” vleigras” and more recently as Country Club Grass
- 2 Seashore *Paspalum* – A finer version with a more supine growth habit

B **Eragrostoideae** Genus *Cynodon*,

- Warm season perennial grass
- Very versatile and can adapt to semi-arid conditions.
- Inter-nodal length and leaf size will vary according to climate.
- Growth habit stoloniferous - 60-80 % lateral.
- Responds well to traffic.
- Rigid Leaves. - Unbending leaves will result in Nap
- Found all over the RSA

Species

- 1 *Cynodon Dactylon* (Also known as “Kweek” in the RSA - overseas referred to as “Bermuda Grass”).
- Varieties planted on Bowling Greens in the RSA - . Royal Cape, Outeniqua, Sahara, Silverton Blue, and Kweek.

Note Royal Cape and Outeniqua have a very fine texture. Their DNA profile is very close to that of Bayview (*C. transvalensis*)
Silverton Blue - Well adapted to warmer climates – should not be planted south of East London. Very flat small stubby leaves. Will not survive if covered by more than 4.00mm of top-dressing.

- 2 *Cynodon transvalensis* -
- Fine textured. - leaves small, narrow and pointed
- Supine growth habit.
- Tolerant to low mowing height as long as lateral growth is not affected
- Seeds are sterile - -propagated vegetatively.
- Very fast grower – intolerant of shade.
- Varieties
 - Florida - Origin – Gauteng – does not adapt well at the coast
 - Skaaplaas - Origin - O.F.S. Shallow roots
 - Harrismith - Origin – Harrismith Yellowish colour Very Versatile
 - Elliot - Origin - North-East Cape
 - Bayview - Origin – Western Cape Fastest grower Thrives anywhere in RSA. Shallow roots

Note DNA profile shows Florida and Bayview at opposite ends of the spectrum with the other three in between. Many other varieties (e.g. “dam kweek”) have been identified and sent for assessment but all have a DNA between the established extremes and not worth developing. commercially.

C Hybrids

- Hybrids (*C. Dactylon* X *C. Transvaalensis*) were developed at Tifton USA Some have been planted successfully in the RSA in the coastal region of KZN– Tifdwarf, Tifgreen, and Tifeagle. They are all dwarf varieties. They all have a lowered resistance to fungal diseases and invasion from foreign grasses.
- Other hybrids have developed naturally where parent grasses have been adjacent - Gulf Green, Royal Blue, and Frankenwald Fine

Note Gulf Green very fast grower – needs to be mown too frequently.
Frankenwald – *C transvalensis* (var Elliot) X *C. Dactylon* (var Royal Cape) not stable easily reverts to parents.

D Summary

If a club is contemplating planting a green, they should accept the fact that there is no perfect grass. Selecting an exotic grass will always lay the grass open to invasion of a local “kweek”. Maintaining the purity of a green requires continuous vigilance on the part of the Greenkeeper – any sign of an invasive grass must be dealt with immediately. If the grass selected is not indigenous to that area it must be an aggressive grower capable of adapting to local conditions and out-grow any outside invasive grass or the club must establish conditions which are more suited to the grass selected than the local indigenous invader e.g. in regions where salinity is a problem *Paspalum* will invade and out-grow any other grasses. Even the addition of salt (NaCl) in small doses will ensure the viable sustainability of the *Paspalum* over other grasses

E Suggested grasses for specific regions of the RSA

1 Coastal Regions

- Oranjemund - Cape Town - East London ; Bayview, Harrismith, and Paspalum if there is any salinity, Royal Cape, Outeniqua
- East London – Durban – Mozambique Border; Silverton Blue -Bayview - Tifdwarf, Harrismith, and. Paspalum (preferably Seashore Paspalum) Royal Cape

2 Karroo and Highveld where frost occurs

- Bayview, Paspalum Vaginatatum, Skaaplaas, Harrismith Outeniqua.

3 Lowveld

- Silverton Blue, Bayview Paspalum Seashore,

The chronic problem with all these grasses is the tendency for foreign invasive grasses to take over. . If the soil is not already - saline then it is still possible to plant Paspalum (Vaginatatum or Seashore) and to introduce salt (NaCl) - about 10-15 Kgm / month to increase the sodium content to 2-3 %