

COASTAL GOLF COURSES

SHORELINE is an innovative blend of three slender creeping red fescue cultivars; the name SHORELINE is derived from the Latin *litoralis*, the species name for slender creepers. The mix contains the #1 -ranked variety *Viktorka* alongside long-established cultivars *Barmalia* and *Barpearl*.

The mix provides superior salt tolerance for fescue dominant turf on links and seaside golf courses exposed to salt spray and salt-laden winds. It is suitable for the construction and overseeding of all free-draining areas exposed to salt.

Salt tolerance is a complex issue. Most salt stress issues experienced on golf courses throughout the UK and Ireland are caused by salt spray and/or salt laden winds. Problems associated with high salinity soils are much more complex, and more difficult to manage due to the ability of varying soil particles to attract salt under differing environmental conditions.

The grass plant's response to salt stress can vary significantly during its life cycle. The plant's capabilities at different stages, from germination to established sward must therefore be tested to realise any practical solutions for a dedicated grass seed mix.

Germination salt tolerance is tested in a laboratory using ISTA parameters at different salt levels equivalent to sea water of 20,000 and 30,000 parts per million (ppm), with 0ppm as a control.

Laboratory trials at Barenbrug research demonstrate the superior germination capability of cultivars of slender creeping red fescues (*Festuca rubra litoralis*) in comparison with cultivars of Chewings fescues (*Festuca rubra commutata*). The data represents percentage germination after 30 days at 0ppm (control), 20,000ppm and 30,000ppm - See Figure 1.

Tests on established grass plants are carried out in two distinct environments, in a glasshouse grown in rootzone and secondly in field trial sites in native soils and imported rootzones in locations naturally exposed to salt stress. Slender creeping red fescue again generally demonstrates superior salt tolerance in comparison with Chewings fescues - See Pictures 1 & 2

Formerly BAR TRIO
100% slender creeping red fescue

40% **BARPEARL**
Slender creeping red fescue

30% **VIKTORKA**
Slender creeping red fescue

30% **BARMALIA**
Slender creeping red fescue

Usage **Overseeding and/or construction** of free-draining fine and medium-fine turf areas exposed to saline conditions.

Key points Germination and survival in salt;
Viktorka #1 slender

Sowing rate 35-45g per m²
Sowing depth 20-30g per m²
Oversowing rate 8-12mm
Mowing height down to 4mm

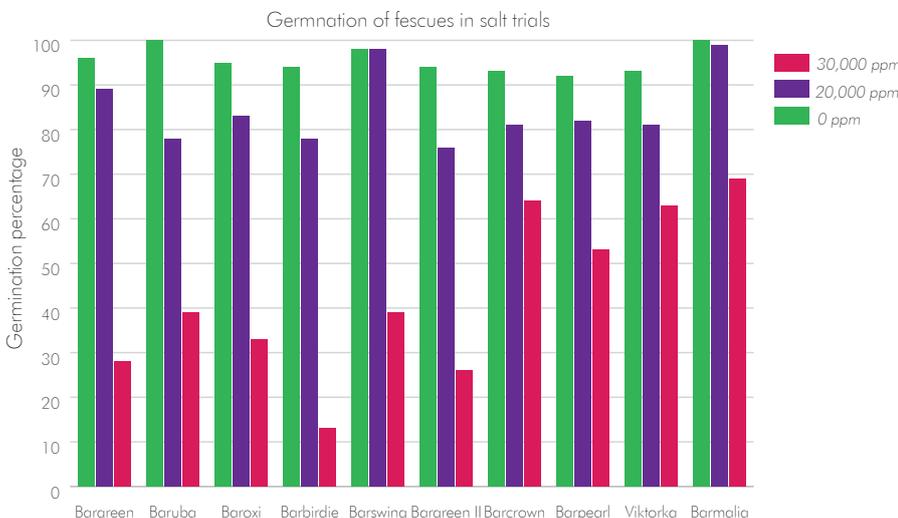


Figure 1: Laboratory Test of germination of slender creeping red fescue and Chewings fescue.



Pictures 1 & 2: Glasshouse salt tolerance trial on three month old established plants at Barenbrug Research. Chewings fescue (left) versus slender creeping red versus slender creeping red fescue (right) at 30,000ppm salt water irrigation over a period of three months.