



Grass seed technology in action

STRI-Rigby Taylor grass seed sports surface wear trial: A differential strip wear machine replicates different levels of wear on sports pitches

New-age 3G synthetic turf pitches maybe hitting the headlines, but natural turf is still the main game in town!

In recent years, major advances have been made in the breeding and understanding of grass species to achieve increased wear tolerance, less susceptibility to turf diseases and greater tolerance to environmental stress conditions such as drought or cold conditions.

At the STRI, a Rigby Taylor-commissioned Sports Wear Trial had sown 24 mixtures and some blends of grass seed and cultivars, some with exceptional and incomparable characteristics. The 2014 trial is being continually assessed from seeding on 24 July until its final conclusion in the summer of 2015, when the final assessment will be for recovery after wear.

Assessments will include:

- Germination and early establishment
- Turf quality
- Wear tolerance
- Visual colour and chlorophyll index
- Turf cover/disease tolerance
- Recovery.

Rigby Taylor has also been

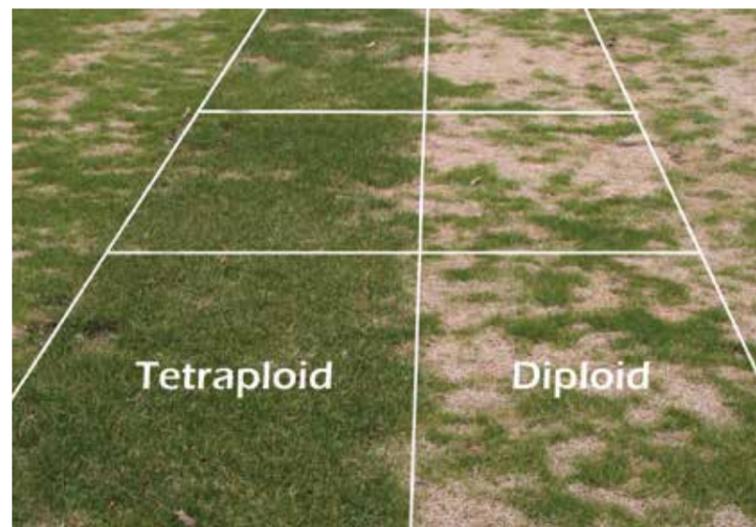
promoting the use of tetraploid cultivars of perennial ryegrass, introducing them in specialist seed mixtures for sports uses.

The latest is R25 CRT, an extraordinary 100% perennial ryegrass blend featuring creeping AND tetraploid perennial ryegrasses. This leading innovation provides the fastest establishment possible for the

renovation and divot repair of high impact playing surfaces.

The new mixture includes Stolawn, a creeping perennial ryegrass, Fabian a new second generation tetraploid perennial ryegrass together with Columbine and Duparc, both perennial ryegrasses

Normally stolons are not associated with ryegrasses yet Stolawn is



Tetraploid grasses showed greater tolerance to Fusarium compared to Diploids



A close up of a single elongated stolon emerging from the crown of another, above; and showing the creeping/knitting habit, right



an exception. Triggered by wear, the plants are induced to produce elongated stolon-like horizontal growing vegetative parts, which allows the opportunity for 'self-repair' of bare spots in heavy traffic wear areas. The tillers from the stolons knit and intertwine to produce a strong turf surface with excellent wear tolerance and persistency. They can also separate and develop as single plants.

The science behind tetraploids is straightforward. Traditional diploid turf grass perennials have two sets of chromosomes; tetraploids have four sets. This means they have bigger cells, higher levels of moisture content and improved stress and disease tolerance compared with diploids. Seeds weigh about one-and-a-half times more than diploids.

The Tetraploid grasses, such as Fabian provide stronger, deeper, denser root system for greater stabilisation and have characteristics that can be exploited alongside traditional grasses. Such benefits include, higher energy seed for rapid germination, establish well in cool conditions and offer increased seedling vigour. They also show a depth of colour that blends well

with existing perennial ryegrass swards for excellent presentation. In addition, enhanced rooting capability is achieved both in terms of mass and root depth.

Tetraploid ryegrasses offer superior tolerance to winter turf diseases such as Microdochium Patch, Leaf Spot & Rust diseases, making them ideal for increasing winter stress performance. In addition, tetraploids have shown excellent tolerance and recovery under dry, drought like conditions, retaining grass cover and colour

R25 CRT is an excellent all year round mixture suitable for a range of situations such as sports pitches, racecourses and divot repair.



Tetraploid rooting on the left shows greater mass and length compared to Diploid grasses