

## 'Turf can look very good at lawn heights of cut but very poor when mown down for a green'

**Peter Hayes of the Sports Turf Research Institute looks at the top grasses - whether choosing turf or seed.**

The STRI is the only independent organisation in the UK which conducts merit tests on different amenity grasses. The Institute has carried out such work since its foundation in 1929 and has maintained a structured grass testing programme since 1957. All commercially available grasses which are suitable for use in the UK have been tested in this programme.

At the present time 14 grass species and 365 different grass cultivars are being evaluated at the STRI. These grasses are tested for different uses in one or more of 20 separate grass trials. In total, there are in excess of 5,000 individual grass cultivar plots at the STRI. Data collected from the many grass trials are used to update the annually published 'Turfgrass Seed' booklet which lists commercially available amenity grasses in order of merit for different uses. This booklet is widely distributed to many different users of amenity grasses. No greenkeeper should be without an up-to-date copy of this booklet.

Of the 365 different grasses in trial at the STRI, 192 are commercially available and listed in 'Turfgrass Seed 1994'. Within this number there are 33 Chewings fescues, 25 slender creeping red fescues, 19 strong creeping red fescues, 13 browntop bents (including 'Highland') and 6 creeping bents. This gives the traditional greenkeeper a total of 90 different grasses to choose from for use on the golf course.

The 'Turfgrass Seed' booklet also provides information on the performance of these grasses. This information should help the buyer of seed and turf to select the right grass types and cultivars for the intended use. For turf it is important that the grower has used the appropriate grasses and in this case, the greenkeeper 'hopefully' will ask about the grass cultivars from which the turf has been grown before he completes his purchase. Turf can look very good at lawn heights of cut but very poor when mown down for a green. Please note that seeds mixtures containing better quality grass cultivars and turf grown from such cultivars



The effects of golf wear on different red fescue cultivars

**Table 1: Combined list showing the top 10 cultivars of Chewings fescue and the top 10 cultivars of slender creeping red fescue for use in golf greens.**

Cultivar	Tolerance of close mowing	Shoot density	Short growth	Freedom from red thread	Summer greenness	Winter greenness
Barcrown	8.7	9.0	7.2	8.1	MG	DG
Center	7.4	7.5	6.6	7.2	MG	DG
Lobi	7.3	7.5	6.3	6.9	DG	MG
Smirna	7.3	7.3	6.7	5.9	MG	MG
Frida	7.1	7.4	6.7	7.3	MG	MG
Olivia	7.1	7.3	7.3	6.7	DG	MG
Enjoy	7.1	7.3	6.7	6.7	MG	MG
Logro	7.0	7.4	6.2	6.9	MG	MG
Bargreen	7.2	7.2	7.7	7.3	DG	MG
Jupiter	7.1	7.1	6.3	5.9	DG	DG
Estica	7.1	7.1	6.7	5.3	MG	DG
Oriflamme	7.2	6.9	6.3	6.0	DG	DG
Recent	7.1	6.9	6.0	4.6	DG	DG
Baruba	7.0	6.9	6.4	7.1	MG	DG
Waldorf	6.9	7.0	6.1	7.5	MG	MG
Liprosa	6.8	6.9	6.2	5.8	MG	DG
Rainbow	6.8	6.9	6.5	6.9	MG	MG
Roulette	6.8	6.8	7.4	7.5	MG	DG
Horizon	6.7	6.8	5.8	6.1	DG	DG
Dawson	6.7	6.5	5.4	5.5	DG	DG

**Table 2: Commercially available cultivars of browntop (*A. tenuis* and *A. castellana*) and creeping bentgrasses for use in golf greens**

Cultivar	Shoot density	Fineness of leaf	Short growth	Freedom from red thread	Summer greenness	Winter greenness
<i>A. tenuis</i>						
Heriot	7.7	7.5	7.1	5.7	MG	DG
Sefton	7.6	7.7	5.6	4.6	MG	DG
Lance	7.4	7.2	6.6	6.3	MG	MG
Bardot	6.5	7.2	6.7	5.8	MG	MG
Duchess	6.3	6.9	6.7	5.5	MG	MG
Saboval	6.1	6.9	5.7	5.5	MG	DG
Egmont	6.9	5.9	5.9	6.3	MG	DG
Tracenta	6.0	7.0	7.4	4.1	MG	MG
<i>A. castellana</i>						
Highland	4.8	3.6	3.6	3.6	LG	DG
<i>A. stolonifera</i>						
Penneagle	5.9	5.1	6.1	6.8	MG	MG
Carmen	5.9	5.6	5.3	6.6	LG	MG
Pennecross	5.7	5.4	6.3	6.6	MG	MG
Prominent	5.5	5.7	5.3	7.1	MG	DG
Emerald	5.2	5.1	6.3	6.5	MG	MG

may cost more than those which contain poor quality grasses. However, poor grasses will limit the performance of turf, irrespective of how well that turf is managed. Cheap grasses can become very expensive if they do not perform at the desired standard and as a result require extra maintenance or, in the extreme, need to be replaced.

In the 'Turfgrass Seed' booklet there are three tables detailing the performance of red fescue cultivars, one each for Chewings, slender creeping and strong creeping red fescues. Of these grasses only the better cultivars of Chewings and slender creeping red fescues are able to withstand the very close mowing and wear which a golf green receives. At the STRI we now advise that a

mixture of Chewings and slender creeping red fescues are used in seeds mixtures for golf greens, rather than the traditional 80% Chewings fescue, 20% browntop bent mixture. In this respect, we suggest that a mixture of 40% Chewings, 40% slender creeping red fescue and 20% browntop bent is used. To help readers of Greenkeeper International choose cultivars of Chewings and slender creeping red fescue for use in golf greens, I have compiled a table for those grasses based on 'Turfgrass Seed' 1994 ratings. This table contains the best 10 cultivars of each of these types of grasses. This information is presented in Table 1.

The performance of commercially available cultivars of browntop and creeping bent

grasses are described in one table in the 'Turfgrass Seed' booklet. However, this is divided into three sections, one each for: *Agrostis tenuis* - browntop bents; *A. castellana* - browntop bent (Highland); and *A. stolonifera* - creeping bents. Data from 'Turfgrass Seed' 1994 for established cultivars of these grasses are presented in Table 2. At present the STRI advises that only the very best cultivars of *A. tenuis* browntop bents are used in seeds mixtures for golf greens.

Having selected an appropriate seeds mixture, there are two other factors which need to be considered: purity and germination. These factors are covered by the official seed regulations, which set legal minimum standards for germination and purity. For example, seed of perennial ryegrass, when sold, should have a minimum germination of 80% and an analytical purity (pure seed content) of 96%. Similarly, red fescue seed should have a minimum germination of 75% and an analytical purity of 90%. Such minimum standards may be acceptable in general use, but unacceptable for specialist uses such as golf and bowling greens. In such cases, a few weed grasses can dramatically increase maintenance requirements and as a result costs. They will also delay the establishment of a usable green. High germination rates are desirable as a greater number of the seeds sown will initially contribute to the new sward. In addition, germination is often associated with vigour. Seeds with high vigour tend to germinate faster and more evenly. They also produce, as the name suggests, more vigorous seedlings, which are better able to withstand the arduous early days of establishment. Information regarding seed purity and germination should be supplied with the seed by all good seed merchants. Buyers of seed should ask for and be prepared to pay more for seed which exceeds the minimum certification standards, especially if their particular application demands a high quality finish.

■ *Turfgrass Seed 1994* is available from the STRI at a cost of £1.50 including postage. Tel: 0274 565131 or write to The Sports Turf Research Institute, Bingley, West Yorkshire BD16 1AU.