

TURF OR SEED

Robert W. Laycock examines the advantages of both methods and new species

The method of establishing grass on the playing surface is one of the major decisions in the construction of a new golf course. It affects the quality of the game, as well as the time taken to bring the course into play.

In the United Kingdom the choice is simply whether to turf or to use seed. Elsewhere in the world there is a further option - the use of "sprigs" or stolons.

Whichever method is used, it is vital that seed should not be sown nor turf laid until the greenkeeper is absolutely sure of the condition of the underlying drainage system, the quality of the rootzone material and the evenness of the surface levels.

In theory, the use of seed gives the user the widest choice of species and cultivars, and it should be possible to pick and choose the best available for each particular situation. In practice, however, the constructor tends to choose from the ranges of proprietary mixtures offered by each of the major seed houses.

In devising their mixtures the seedsman inevitably has to compromise between availability and price. Some desirable cultivars are effectively exclusive to a seedsman and so the "ideal" seed mixture remains hypothetical. Even so, the seed guide issued by the Sports Turf Research Institute each year enables an objective comparison to be made among the available mixtures.

Given time, seed can give a first class surface. It does not introduce any undesired soil types to the course and of course is by far the cheapest technique. Unfortunately in the British Climate, seed is significantly slower than turf, whereas in other parts of the world, where water temperatures prevail, greens grown from seed can be in play in a matter of weeks and turfing becomes unnecessary.

Turf grown on a mulch, possibly with a reinforcement of netting, and sold when a few weeks old, can give good results on the golf course. However, because it consists of fine-leaved seedlings any coarse grass present in the sown mixture may not become apparent until the turf has matured on site.

Seedling turf is vulnerable to desiccation at the establishment phase, but gains a few weeks growth over seeded areas. It is debatable whether the benefits of this outweigh the high cost.

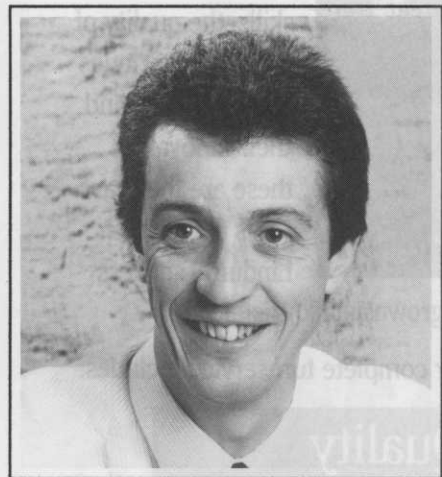
In the UK several companies producing this type of turf were in operation in the mid - 1970's, but none of these original companies are still in existence, though there seems to be a recent revival of interest from new companies. A French technique involving the use of seed sown into a composted pine bark mulch was also developed in the 1970's and is now being promoted in the USA as well as in mainland Europe.

In spite of this, seedling turf is not suited to large-scale production and will therefore inevitably remain a minority interest among turf growers. Pressure to get new golf courses into play as quickly as possible means that more and more greens in the UK are being turfed using cultivated turf. In Britain it is perfectly feasible to lay turf in autumn and putt on it by early summer; or lay it in spring and putt in late summer.

It is a surprising fact that although the total number of acres of turf production in the USA is massively greater than that in the UK, I estimate that a similar acreage of greens turf is produced in both countries. This stems from their respective climates, the grass species used in each and the comparative standard of greenkeeping care.

Cultivated turf consists of grass specially sown and grown on a natural soil. Turf is harvested when it is mature, which gives greater strength to the established playing surface and allows heavier use at an earlier date than with other techniques. A range of grass mixtures is available to suit the majority of possible uses.

Choosing a supply of cultivated turf depends on the soil on which it is grown as much as the grasses it contains. There is no point in laying turf grown on a heavy soil on to a new green built with a free-draining rootzone. Water simply would not drain



Robert W. Laycock

from the surface, playing days would be lost and the sward would deteriorate in play, no matter how good it was when purchased. The best way to choose turf if you are at all unsure is to inspect the field from which your order is to come, as close as possible to harvest date. Any reputable turf grower will welcome the opportunity to show you his fields. There is no point in looking at turf six months ahead of purchase. Fields can vary and only the one from which the customer's turf will come is of real interest to him.

In the UK and at golf clubs in Europe with a British influence, the traditional mixture for creating a putting surface is fescue/bent. The fescues may be a combination of Chewings fescue and slender creeping red fescue while the bent is predominantly browntop (known in the US as Colonial bent), whether "Highland" (*Agrostis castellana*), one of the *Agrostis capillaris* cultivars, or a native type. Frequently annual meadow grass has invaded greens over the years, but sensible management can minimise its extent.

In more continental temperate climates, creeping bent grass, (*Agrostis stolonifera*), is used for greens, particularly in the USA where it is virtually exclusively used. "Pennncross" is the best known cultivar, though other similar types are available. Seed of "Pennncross" was first released in the

USA in 1954 which makes it one of the oldest cultivars on the market.

Because there is only one type of grass on a creeping bent grass green it has a very uniform texture, albeit coarser than the finer fescues and browntop bents. Different forms of creeping bent in the green can cause segregation and a patchy appearance.

With access to a particularly good strain of creeping bent grass one could create a green vegetatively, using pieces of stolon as cuttings which would rapidly fill in to make a full grass cover. A number of vegetatively propagated strains of creeping bent were selected in the USA in the first half of this century to enable greens to be made in this way. In the UK this technique was restricted to the infamous "Emerald Velvet" bent grass which was available by mail order briefly about thirty years ago, but is still referred to in the amateur gardening textbooks as a way of making a new lawn.

As American golf course designers have had a greater impact on European golf they have brought with them the grasses they know best. These have begun to increase in prominence over the grasses traditionally used for golf in mainland Europe, which had originally been introduced as a result of British influence. Thus creeping bentgrass is likely to become more common in Europe.

In Southern Europe, North Africa and other sub-tropical and tropical areas the most usual grass for golf greens is Bermuda grass (*Cynodon* spp). Like creeping bent it can be propagated by

seed or vegetatively, the better types being established from sprigs and sold as sprigs or turf.

As more golf clubs are built around the Mediterranean the improved Hybrid Bermuda grasses, originally bred in Georgia, USA have been introduced and are now widely used in the area. One drawback is that they become brown and dormant in temperatures below about 10 degrees centigrade.

As with greens there is a choice of grasses suitable for use on tees in the UK. Traditionally a mixture of red fescue and browntop bent has been used, similar to that on the greens. To add resilience to the sward smooth-stalked meadow grass may be added. A radical departure from this is the use of a perennial ryegrass turf on the tee. Forgetting the tradition of the game and looking objectively at the required characteristics of a tee, many people find that the best of the modern, fine-leaved ryegrasses provide a combination of features which are beneficial on the tee, particularly when used with a rhizomatous grass such as creeping red fescue which can help repair divots. A number of the top clubs are trying this kind of seed mixture, particularly on par 3 tees.

On North European 'American - style' courses the tees tend to be creeping bent or smooth-stalked meadow grass, both of which are also able to repair damage. Between the latitudes of 35 degrees N to 35 degrees S, Bermuda grass is more appropriate because of its heat tolerance.

Whether turfing or seeding, the results depend on the initial preparation and the standard of greenkeeping af-

Robert Laycock B.Sc. M.Sc. D.I.C., C.Biol., M.I.Hort., is a chartered biologist and turf grass scientist. He has been Technical Director, Rolawn (Turf Growers) Ltd since 1987. A graduate in botany from University College, London he worked for the Field Studies Council before carrying out post graduate work on close-mown turf at Imperial College. Later he undertook research at the Sports Turf Research Institute at Bingley for six years.

His main responsibility at Rolawn is the development and sales of turf for the professional sporting market and overseeing the quality control processes. He also provides technical advice for customers and staff and was responsible for introducing the concept of washed turf to the UK.

Robert is also much in demand as a lecturer on sports turf and lawn care. He has published scientific papers on turf grasses, and numerous articles on turf management for specialist journals and features on lawns for the general public.

ter establishment, as much as the grasses used, the temperature and availability of water. Choosing the most appropriate material is the key to success.

FROM THE FAIRWAY

Dear Sir,

Whilst reading the very interesting March issue of 'the Golf Course' I was surprised to read under Topical Tips your recommendations in response to the greenkeepers question about the Certificate of Competence. The advice you gave was inaccurate.

I will work through it step by step.

It is wrong to refer to the age of 25, as that was the starting age and will increase by one year each year.

1. Those born before 31 December 1964 and are spraying on their own or their

employers land (owned or rented) do not require a Certificate of Competence and do not need to be supervised.

2. Those born after 1 January 1965 require a Certificate of Competence - unless they are being supervised by a certificate holder.

3. Those born before 31 December 1964 may not unless certificated supervise an operator who was born after 1 January 1965.

4. All contractors whatever their date of birth must be certified. A contractor is an operator paid or unpaid who is applying

pesticide to land which is not owned or rented by themselves or their employer.

There is so much confusion about the legislation that I hope you will forgive me for attempting to put the record straight.

G. Keith McKee

**European Technical Manager
Fisons plc Horticulture Division**

Editors Note:

Your guidance is much appreciated. The legislation is complicated and piecemeal, but in time all greenkeepers will be required to undertake training regardless of age. There is no substitute for sound knowledge and skills.