

OVERSEEDING Golf Greens

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THAT OLD CHESTNUT

We all want the best possible playing surfaces. For golf, the quality of the putting surfaces takes top priority. The golfer requires firm, fast, true and smooth greens that are receptive to well hit approach shots, that grip then release a chip and also allow a putt to roll out true. For the greenkeeper, we add ease of management to the playing quality. For the sake of argument, I say that better greens come with an increased proportion of the finer grasses. Bents and fescues create firm, fine and fast greens, while annual meadow grass gives good summer surfaces that very often suffer through autumn and winter, being soft and disease prone. I know that it is not entirely true to say that the quality of the surface is dependant on the sward composition, but an increased proportion of the finer grasses does usually bring; improvements in playing quality, a reduction in the propensity to build thatch, improved disease tolerance etc (better surfaces that are easier to manage). The finer grasses are good and must be the object of our intention.

GET REAL

Sometimes I feel that I'm wishing into the wind! Let's just say that we are aiming for predominantly bent and annual meadow grass greens for inland courses and predominantly bent and fescue surfaces for coastal situations. All I aim to do is reduce the level of annual meadow grass that I see and make things better for everyone. It's my job, remember.

WHAT DO YOU KNOW?

In my previous article "Changing the Nature of your Greens" (Greenkeeper International, April 2002 - unedited copies available via email); I tried to explain that the grass composition of golf greens reflects the environmental pressures being placed upon them. These pressures may come from the local climate, the geography of the site, the level of play and of course the greenkeeping management program. With the knowledge that the different fine turf grass species are adapted to survive in different conditions, we can endeavour to create an environment favourable to the finer grasses rather than (as at present) annual meadow-grass. To change the nature of the greens you have to influence the environment to favour the desired grasses. Annual meadow-grass comes with a highly productive and disturbed environment

while the finer bents and fescues are left longing for a less productive and more settled situation. The current vogue for maintaining high levels of active growth (as dictated by dubious soil test based fertiliser programs) and regular inconsiderate verticutting using super-effective tungsten tipped verticut reels plays into the hands of meadow-grass dominance. Obviously, there are other factors; if the environment is overriding (poor drainage), or the course is heavily played through the year, then there is little else that you can do but work with the meadow grass and make the best greens possible. This however, is not nearly always the case and a great deal of my work with greenkeepers is involved with resetting the environment to bring the finer grasses – with much success I may add. The great challenge for the greenkeeper is (if possible) to create greens dominated by the finer grasses. Also, let's not forget that one of the reasons why Annual meadow-grass is so invasive is because it is such a cunning seeder (so to speak) – something to take encouragement from.

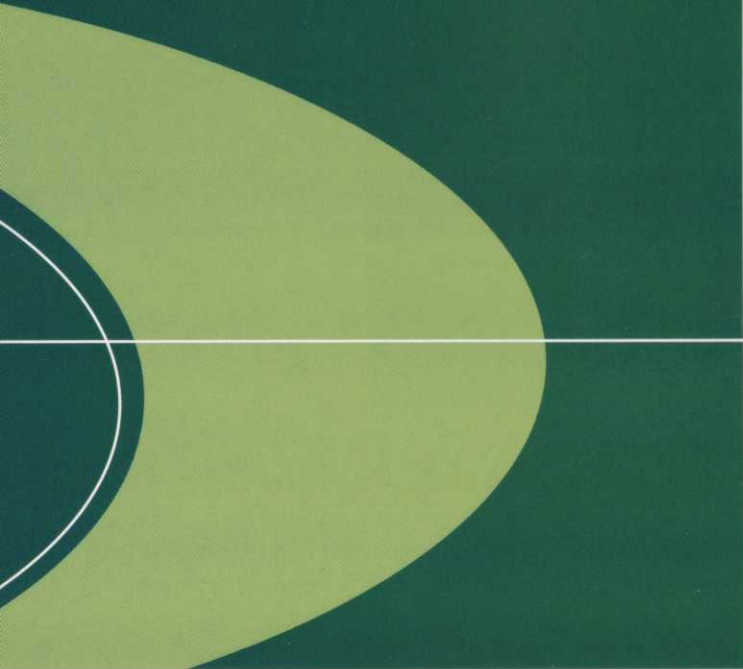
SO, WHAT ABOUT OVERSEEDING?

Simply changing the environment will encourage the existing finer grasses to flourish and take greater dominance. This process of change may be enhanced and accelerated with overseeding. This article is about successful overseeding. My perception of general opinion regarding overseeding is that it is a total waste of time, effort and money. Many greenkeepers hardly notice a difference achieved by overseeding, let alone the golfers. This lack of success may be due to incorrect overseeding procedure or maintaining the wrong "established environment" i.e. unsuccessful germination or failure to establish. Overseeding (if carried out correctly) can really help improve the quality of our greens.

Common sense!

Successful overseeding is simple, just follow the rules...

- Choose the correct species for your situation
- Choose the best cultivars
- Undertake your overseeding at the right time of year during favourable conditions
- Create a receptive seedbed
- Place the seed correctly *into* the surface
- Encourage germination



- Nurture the seedlings through establishment to maturity
- Manage the correct "established environment"

SUCCESSFUL OVERSEEDING REQUIRES A SPECIFIC MAINTENANCE PLAN

Introducing new grasses into your greens cannot be achieved by crow barring overseeding into the existing program. Seedlings are small and many are unable to survive in the conditions experienced by the established plant – they need help. You need to approach overseeding with a specific plan. To start with, successful overseeding needs to be founded upon a considerate and patient attitude – young plants need nurture. I'll make sure the golfers appreciate that their consideration is also necessary if the greens are to improve - It's my job, remember.

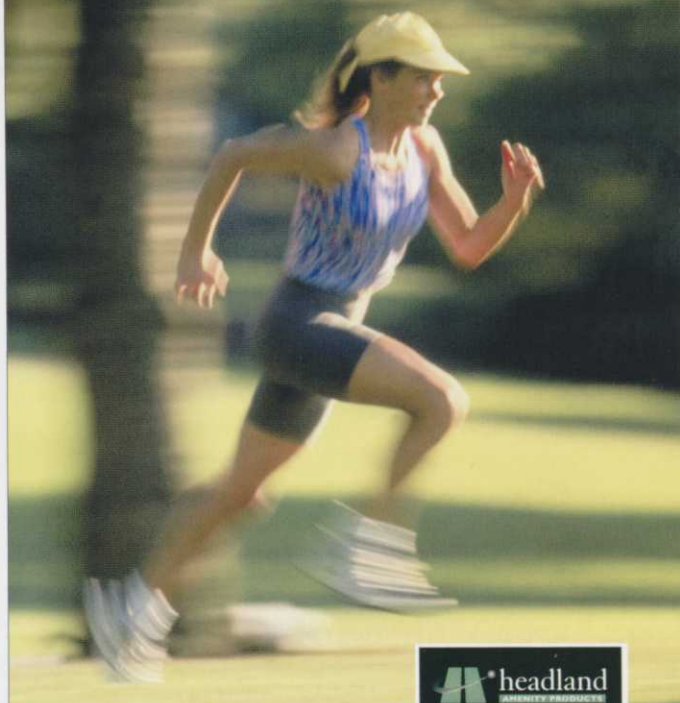
CHOOSING THE CORRECT FINE TURF GRASS SPECIES

Choose grass species that, when established, actually have a chance of surviving in the environment you are tending. The existing composition of your greens will give you an indication – take a closer look. If drainage is a problem sort it out, then select your preferred grass species. From my previous article, we know that Browntop bent is adapted to survive in fairly unproductive, undisturbed environments possessing satisfactory drainage and preferably an acid soil. Creeping bent requires fairly continuous "active growth" through the year with infrequent levels of disturbance and low levels of stress i.e. a quiet, high quality course set in an environment where play occurs during the growing season and tails off during dormant periods – nice work if you can get it. Velvet bent competes with moderate levels of stress and low levels of disturbance. Red fescue prefers an unproductive, dry, acid environment with low levels of disturbance. Annual meadow-grass likes a highly productive and disturbed environment with low levels of stress. The choice is yours. Basically, in the UK we are looking to favour Browntop bent for inland soil based greens and bent/fescue on for coastal situations (ignoring complicating factors).

CHOOSING THE CORRECT VARIETY OF SEED

Use the science; the STRI cultivar-testing program for amenity grasses has been developed for over 35 years now. Tests are carried out in a number of areas including close mown fine turf. The results of the tests were listed each year in the STRI Turfgrass

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Seed booklet now the "2003 Buyers Guide to Quality Amenity Turfgrasses" (produced in conjunction with The British Society of Plant Breeders). The lists within this booklet enable managers of turf to evaluate the different cultivars in terms of colour, shoot density, disease tolerance. This is an excellent trial, which clearly shows how well each cultivar performs under management and wear. You are welcome to view these trials by appointment. Choose top rated varieties, they do perform better. Use a balanced mix of 2-3 cultivars and make consideration to seed coatings and dressings, which may enhance germination and establishment.

TIMING OF OVERSEEDING

The general rule of thumb for overseeding is that it is best carried out in late summer-early autumn when the soil temperature is still high and rainfall adequate for the germination and establishment of new seedlings without experiencing too much environmental stress. Autumn is also a time when the maintenance program begins to tone down, to give the new seedlings a greater chance of surviving. It depends; a spring overseeding will likely germinate the same and establish if allowed, it depends on the intensity of the post-seeding management. Ideally, we should be thinking of introducing the seed when the sward is at its least competitive to give a better chance of establishment. In an annual meadow-grass dominated sward, this may well be during early spring or during the height of summer, which might not be a practical time considering the intensity of play or management. Decide what is best for your situation.

PREPARATION OF THE SURFACE

Before overseeding, the surface must be opened up and turned into a welcoming and protective environment (without unduly disturbing the surface). The surface should be able to accept the seed to the desired depth, be able to permit germination, it should allow the seedling to grow unencumbered and it must also provide protection all-the-way through from establishment to maturity.

The seedbed must be a good growing medium (get rid of thatch it produces stress extremes of wet and dry) - nutrient may be required on sandy materials. The soil must also be open structured to allow rooting to develop (roots grow in airspace), so aerate if necessary.

Bury the seed to prompt germination, aid root penetration and to provide protection for the developing seedling. Work the seed into the turf base/upper soil profile and follow with top dressing. Open the surface by either aerating (hollow tining, micro-hollow tining, solid tining or sarrel rolling) or by opening a channel (slit-

seeder or deep scarifying). Overseed at a rate of 35g/m² for fescue and bent/fescue mixes and at the lower rate of 5-6g/m² for a pure bent-grass mix. Apply seed in conjunction with top dressing then work into the surface and down tine holes by brushing (brushing by hand is by far the most effective method of working top dressing into the surface). Leaving hollow tine holes partially full (i.e. 1-2mm below the turf surface) gives the seedlings a chance to establish, mature and thicken without being unduly disturbed (cut too close) from regular mowing. This tactic should be used for spring overseeding when the post seeding maintenance is (necessarily) quite intensive.

GERMINATION

Climate dictates germination, so time overseeding appropriately taking heed of the prevailing weather and future forecasts. Germination sheets are available to hasten germination. These require the surface to be covered and are therefore quite disruptive – it depends on your level of commitment. Seed germination takes time so be patient, the weather is in charge.

ESTABLISHMENT

Once the seed has germinated we move into the most important "establishment phase". Be considerate through this period, I am fed up with hearing that the seed germinated well not to see any evidence of it 2 months later. Be easy on the seedlings they are small, vulnerable and need time to strengthen enough to survive the fine turf environment. This will mean toning down the intensity of mowing (raise mowing heights to 6-8mm) and verticutting (don't for a while). To prevent or control thatch build up, it is best that the greens are intensively worked (scarified, hollow tined and top dressed) prior to seeding. Timing may be best in autumn when the maintenance program begins to naturally tone down. Just be considerate and patient, it will come.

GET BACK

Successful overseeding requires a considered plan. You must be able to move your greens from a nurturing environment gradually through to mature intensively maintained fine turf. Don't bother if you are not creating an environment suitable for the finer grasses at the end of it.

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