



# The Appliance of Science

**David Robinson, outlines the latest developments in top dressings and highlights the important role its dressings are playing in the preparation of Hoylake, for the forthcoming British Open.**

**In the search for ever-improved quality of greens, the production and application of high quality, consistent top dressings has become increasingly important and scientific.**

The status and reputation of a golf course is all too often judged on the quality of its greens, which is why treatments and materials which can improve a playing surface, have been a key part of every greenkeeper's armoury since golf began.

Until as recently as 30 years ago, most greenkeepers were still producing their own top dressings on site for fine turf areas, such as greens and tees. Using a mix of local sands, soils and grass clippings they produced a composted soil product which was then screened using a traditional hand-riddle method. Made largely from the same materials as rootzone they ensured a consistent green construction.

As commercial production of top dressings developed, the need for golf clubs to maintain their own on site production diminished and today every golf club will source top dressings from a specialist supplier.

As to which top dressing, and indeed which supplier to use, this really can depend on the location and aspect of the golf course and the specific construction type of your greens. But it is perhaps best to firstly recap why top dressings are used and why they are such a key ingredient when it comes to producing successful putting greens.

Essentially, the role of top dressings is to assist the greenkeeper in producing a true and level, top quality playing surface. Top dressing helps to break down a green's thatched layer, it smoothes out surface irregularities and improves the utilisation of natural and man-made irrigation sources. Used as part of a verti-draining process, top dressing aerates the underlying root level and improves drought tolerance.

## HIGH PERFORMANCE

Given that top dressing has so many performance criteria to fulfil, more careful consideration is needed as to what actually constitutes a top dressing. Essentially the key ingredients are sand (the bulk constituent), silt and clay and a small percentage of organic matter which may be soil, peat or green compost. The industry talks in terms of ratios, for example 80/20 or 70/30 which is essentially the percentage blend of a top dressing - i.e. 70% or 80% sand by volume. But that, of course, is only half the story because the most important detail is the type and grade of sand.

It goes without saying that not all sands are the same and that there are significant variations in particle size or pH balance.

Sand is processed according to particle size, colour or chemical composition, and can be supplied in a moist or dried state. At Bathgate, for example, our high purity silica sand is washed, screened to size, heat-treated, and blended and graded to a fine uniform consistency. On-site laboratory facilities utilise the latest computer based testing and all aspects of the business operate under the auspices of BS EN ISO 9001: 2000 Standard for Quality Management Systems.

## COMPATIBILITY

From a greenkeeper's perspective, all that really matters is finding a top dressing that is compatible with their own course's greens profile and it is here that the importance of a reputable specialist supplier is invaluable. Laboratory-controlled sampling and testing of existing top dressing is essential, with pH, silt/clay and particle size distribution analysis all necessary. Taking soil profiles from a number of different greens is an additional service that most reputable specialists will offer.



## The Appliance of Science



The particle size distribution of a top dressing should be compatible with that of a green's profile in order to maintain or enhance the drainage characteristics. A hydraulic conductivity test will determine whether particle size distribution is acceptable for effective drainage. Coarse over fine, for example, may result in a green surface that is deficient in nutrients and has a low water retention, whereas fine over coarse may result in a surface which retains water with very little air-filled porosity.

The pH of top dressings is also important, with neutral (7) or very slightly acidic dressings, the optimal specification. A growing practice amongst some top dressing suppliers is the use of recycled composted green waste as one of the organic constituents. However, there remain some question marks over the effect this might have on consistent product quality, the argument being that no two batches of recycled waste can ever be the same and therefore the pH level of the dressings are bound to have variations.

Nor has the top dressings market been unaffected by the current 'hot topic' of climate change. Certainly in this country, the blurring of seasons and greater year-round rainfall consistency has had an impact on green upkeep, with a marked move towards slightly more coarser dressings being used.

Another major development in the top dressings market has been in application equipment. The traditional 'belt and brush' method of application was, for too many greenkeepers, seen as labour intensive, time-consuming and disruptive. New spinning plate 'spray apply' equipment can help deliver a more even spread of top dressing and in much quicker time.

Where once it might have taken a full day to apply top dressings to all 18 greens, it may now be done in just a couple of hours. Where once greenkeepers would only consider top dressing twice a year in spring and autumn, now the adage is 'little and often', with the new technology making light and frequent top dressing a cornerstone practice for more and more greenkeepers all through the growing season.

### THE OPEN

All of which brings us to the Royal Liverpool Golf Club at Hoylake, scene of this year's Open Championship. The day to day challenges faced by greenkeepers at golf clubs the length and breadth of the country are magnified a hundred-fold when you have the eyes of the golfing world on you for four days in late July.

Bathgate has been supplying top dressings to Hoylake for several years, though never has the course been under such close public and professional scrutiny, with this its first Open for almost 40 years. Which perhaps explains why top dressing is not only being applied throughout the tee and green areas, but also extensively on the fairways, to help produce an immaculate playing surface befitting this prestigious tournament.

The scale and the profile of the application may be very different to our day to day business supplying golf clubs up and down the country, but the objective remains exactly the same: to work with the green keeping staff to ensure that when people come to judge the golf club, they speak in only the highest terms about the quality of the course.

*David Robinson is General Manager of Bathgate Silica Sands. For further information call: 01270 762828 or visit: [www.bathgatesilica.co.uk](http://www.bathgatesilica.co.uk)*



Royal Liverpool Golf Club, Hoylake - the scene of this year's Open Championship