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TOP-DRESS SUPPLIES

All dresse



Insist on maintainable quality in your top dressing, says PETER JEFFORD. Find the product you like – and stick with it

The first consideration a greenkeeper should have in mind when obtaining top-dressings is consistency of quality. He should retain that consideration! There is no benefit derived in applying layers of different types of top-dressings and given that a suitable and effective dressing has been located – one which by experimentation has been found eminently suitable for his course – the same dressing of the same quality should be used year in, year out. This will then provide a consistent growing profile for roots on greens which might otherwise form a pan layering, which in turn will influence the conductivity and retention of water, soil aeration and rooting.

In an ideal world the wise greenkeeper will attempt to use the same supplier, one who can guarantee a consistent and repeatable product each time and deliver it promptly. In addition, I would advocate the application of top-dressing on a little but often basis, rather than the almost traditional large bulk applications in spring and autumn. This little and often procedure will help the dressing to be incorporated more quickly into the soil and reduce the aforementioned soil layering, with the added benefit of minimum disruption to play – an important consideration. I should add that my advocacy of little and often is now

becoming very much more a trend and is to be applauded.



The type of sand used in top-dressing is vitally important and should contain virtually all particles within an 0.125 and 0.5mm size range, this being the traditional British system. Increasingly, advisors are now specifying 0.25 to 0.75mm size range, though the main criteria for the reader to remember is that the majority of particles should fall within the medium sand range and that the mix provides the correct balance of pore space and desired infiltration. In stating that, it should also be noted that whilst particle size and range are vital, one should be aware that sands differ also in shape, mineralogy, colour and lime content and these are additional factors which will influence the quality of the product. Some sands are excellent for top-dressings whilst others are quite simply useful only for mixing with cement.

Top-dressings and rootzones should therefore comprise a high proportion of sand in the mix, as this will assist with the control of aeration, infiltration, percolation and water retention. The next consideration is the very soil used in the mix itself, a point of major importance. Whilst sand in the UK is still plentiful, suitable good quality topsoils are less readily available and care must be exercised in ensuring that soil from building sites is not used, for in most cases this will have been completely destroyed by heavy machinery. The best topsoils for top-dressings and rootzones are those with a very low silt and clay content, whilst retaining the correct particle size distribution and the appropriate pH.

One of the most important factors, often overlooked, is the organic matter content of the soil. Normally, most greens contain too much

ed up for the ball

organic matter, with greenkeepers spending much time and energy in attempting to reduce it. If you start by applying a top-dressing with a high organic matter – say above 5% – you will immediately begin to overdose the organic content in your greens and thus defeat one of your principle aims, that of controlling thatch build-up. As a general rule of thumb, around 1% – 2% would normally be an acceptable level in a golf green top-dressing. Thinking along these lines, do you know the organic matter of your current top-dressing? Natural soil is largely made up of four parts:

Mineral matter: This is formed by weathering of rocks and parent materials.

Organic matter: This is mainly humus, which arises from dead vegetation and supports the living population of micro organisms within the soil.

Soil moisture: This is essential for plant growth.

Soil air: Adequate aeration of the soil is necessary for optimum root growth and retention of soil micro organisms. Plants should have an acceptable level of each of the above.

Now let us turn to terms used to describe some soil properties:

Soil texture: This describes the physical behaviour of soil and depends upon the proportion of different sized particles. Thus soil with a high clay content would be classified simply as a clay soil.

Soil structure: This refers to the manner in which the particles are organised. Damage to soil structure is usually caused by heavy mechanical equipment used in construction, or by other forms of traffic movement.

Pore space: This is the space between the solid particles of soil. Pore space is available to both air and water, with large pores being air filled and small pores usually water filled.

Summarising at this stage, the reader should remember that the least desirable components for golf course top-dressing and rootzones are high clay or silt, these materials being especially prone to compaction and high moisture retention.

Now let us look at some of the procedures used in the processing of top-dressings at our quarry.

The separator washes and grades the sand, all vegetation is removed and the sand is then graded into coarse or medium/fine particles. This is now ready for further screening and mixing with topsoil.

Following screening, the soil is placed in a hopper feed and conveyed to a heat treatment plant, where it passes through a specially designed kiln drum set at a controlled temperature of 120°C, a process which removes excess moisture and kills seedlings and harmful bacteria. This completed, the next stage is to immediately mix soil with sand while it is still hot. This material is then ready for its final stage, being fed into a further screen which enables both further mixing and removal of particles over 2mm.

The top-dressing is now ready for final delivery but as a final check, random samples are taken for analysis in our laboratory where particle size, moisture content, pH and organic matter are all examined to ensure consistency of quality. If the reader is unsure of any of the areas discussed, he should request an up to date analysis sheet, produced by an agronomist or soil scientist, one who is ideally independent of the supplier.

Fairway dressing

It may be of more than passing interest for greenkeepers to look at top-dressing fairways. Whilst this may not have great significance for many courses, such applications can provide a method for improving problem fairway areas and it should be noted that in the USA this is now an accepted



and successful programme. When considering such action, it may not always be necessary to dress with a sand/soil mix, for in some instances a sand only application will prove beneficial, depending on the problem presented and the solution sought. If, for example, drying out is a problem, a sand/soil mix with a little peat would be recommended, whilst if ball plugging on fairways is an annoyance a high sand content would be preferable.

The benefits of dressing fairways include tighter turf, easier mowing when wet and improved drainage and/or moisture retention. Fairway top-dressing may provide just the solution to problem areas and is a cost-effective way of improving conditions in just the same way as on greens, the target again being density, uniformity, smoothness, firmness and resilience. A high sward density is vital to hold a ball in the ideal striking position, a thin turf being undesirable because of the 'nestling down' of a golf ball.

Construction rootzone

Over the past few years the demand for rootzone material on new course construction has increased dramatically, with its selection critical to long-term good performance of the putting surface. For those involved or about to embark down this route, a few words of advice.

In the first instance I would underline the importance of making an on-site visit to the supplier/quarry to inspect rootzone material prior to delivery. Checks should be made on consistency of particle size, organic matter content, pH, water content/air porosity/total porosity, bulk density and hydraulic conductivity. If these terms are foreign to you, take along your agronomist, architect, site engineer or clerk of works. Once satisfied, ensure that the self same mix will be readily available and stick with both mix and supplier. Make regular random on-site checks upon delivery.

Final summary suggests the following: Find the top-dressing right for your course and stick with it. Cultivate greater awareness by demanding more technical information. Ensure the supplier has sufficient reserves to maintain supplies for many years to come and insist on total, maintainable quality.

The author, Peter Jefford, is currently embarked on a countrywide whistle-stop BIGGA lecture tour, expounding upon the complex subject of top-dressings. He is Managing Director of Rufford Top-Dress Supplies Ltd.