The essential guide to Top Dressing

prepared in association with the Institute of Groundsmanship

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What is top dressing?
It is the application of a sand or blend of sand, silt, clay and compost to an established lawn or playing surface.*

The exact composition of the dressing will depend on the purpose and the type of surface on which it is to be used.

10 reasons why we top dress

- To restore a level surface
- To increase soil aeration
- To change the texture of the soil, especially the particle size distribution
- To improve drainage
- To repair divots
- To protect newly seeded areas and to encourage germination
- To improve grass health
- To improve drought tolerance
- To control and reduce the amount of thatch (OM) in the rootzone
- To fill in joints on newly laid turf

when & how to apply

topdressing

In a sports turf environment, topdressings are traditionally used at the end of the playing season as part of the annual maintenance programme. Some clubs/venues, however, will top dress on a more regular basis throughout the season to repair badly worn areas and/or to improve the drainage in specific areas.

Application of a topdressing can be carried out by hand or machine depending on the size of the area to be treated.

Application by hand followed by brushing in. Brushing gets the topdressing into the base of the grass sward.

Mechanical top dresser

The pitch of the rotors applying the dressing can be set to ensure the dressing reaches the base of the grass sward, dispensing with the need to ‘brush in’ post-application.
A quick way to identify your soil type

A quick way to tell what type of soil you have is to wet your thumb and fore finger and rub some of the topsoil between them:

- **Sandy soil** has a gritty element – you can feel sand grains within it, and it falls through your fingers. It cannot be rolled to make a sausage shape. If it is not a coarse sand and perhaps a sandy loam it may stick together better.

- **Clay soil** has a smearing quality, and is sticky when wet. It is easily rolled into a long thin sausage and can be smoothed to a shiny finish by rubbing with a finger. If it is not a heavy clay it won’t get quite as shiny and be as easy to make a sausage.

- **Pure silt soils** are rare, especially in gardens. They have a slightly soapy, slippery texture, and do not clump easily.

Topdressing testing

Top dressing is a critical turf maintenance operation and to obtain its full benefit the right type of topdressing should be used. One of the key factors in determining what type of topdressing material should be used is the construction profile of the sports surface to be top dressed.

For sand-based profiles, the recommendation is that the topdressing material should be compatible with the existing rootzone, based on its particle size and hydraulic properties. For soil-based profiles, a wider choice of topdressing materials can generally be chosen.

The choice of what topdressing material to use, however, should be based on the turf maintenance objectives and compatibility with the underlying rootzone or soil.

It is recommended that the existing soil or rootzone profile is assessed, preferably by an appropriate soil testing laboratory, to ensure that an appropriate topdressing is selected. Therefore, this essential testing is often carried out as part of a wider turf autonomic assessment, that not only assess the textural class or particle size of the material, but also measures the soil chemical environment.
Testing of in situ soil and rootzones and, in particular, topdressing materials typically comprises the following variables:

- **Particle size distribution** - the size (diameter) of the individual components making up the material.

- **Soil pH** - this describes how acid or alkaline the material is based on a 1-14 scale, where 1 is extremely acidic, 14 is extremely alkaline, and 7 is neutral pH.

- **Electrical conductivity** - this characteristic is used to measure salinity of a soil and is based on the relative amount of dissolved nutrients in a material.

- **Organic matter content** - typically measured as percentage by loss on ignition, where organic materials are burnt off at high temperature in an oven.

- **Plant available nutrients** - measurement of nutrients such as K, P, Ca, Mg etc that may be available to the grass plant.

- **Contaminants or phytotoxic elements** - elements or compounds that may be undesirable to humans or plants, such as heavy metals like As, Cd, Ni etc.

- **Presence of physical contaminants** - this usually involves measuring the presence of undesirable foreign objects in the material such as glass, stones, twigs, plastic etc.

> “Testing should be undertaken by a reputable laboratory to recognised test methods”
**Aeration**
Penetration of the soil profile to allow soil air to be replaced by air from the atmosphere, resulting in improved drainage and deeper rooting.

**Anaerobic soil**
Soil that contains an inadequate amount of oxygen.

**Bulk Density**
The weight of a certain volume of soil.

**Clay**
Particles with a diameter of less than 0.002mm.

**Hydraulic conductivity**
The rate of water flow through the soil profile.

**Organic Matter**
Material within the soil that consists of decaying and decayed organic remains of plants and decaying soil animals.

**Sand**
Particles with a diameter of 0.063mm - 2mm.

**Silt**
Particles with a diameter of 0.002mm – 0.063mm.

**Soil**
A blend of sand, silt, clay and organic matter.

**Soil porosity**
The amount of pore spaces within a soil. This is primarily influenced by the soil structure.

**Soil structure**
The arrangement of the soil particles and aggregates.

**Soil texture**
The different proportions of sand, silt, clay and organic matter.

**Type of aeration**
Slit tines / Hollow cone tines / rotary blades.

**Vertidrain**
A pedestrian or tractor-powered implement used for aeration. It comprises a series of hollow or solid tines that punch into the ground causing shattering of the soil profile to aid drainage and root growth.

**Water filled porosity**
The amount of pore spaces within a soil that are filled with water.

**Water retention**
The holding onto water by a soil.
Measure the dimensions of the area to be treated and multiply the Length x Width to get the square metres to be treated. Multiply the square metres of the area to treat by the square metres rate you wish to apply. Divide this total by 1,000 to give the tonnes needed.

Typical rates of application are:
- Rugby/Football - 50 t to 100 t/pitch
- Golf Greens - 15kg/m²
- Fairways and lawns - 10kg/m²

For best results topdressing should be applied as part of a routine maintenance programme during and at the end of the season. A good maintenance programme should include fertiliser application, aeration and over-seeding.

Further advice on maintenance plans is available from the IOG or STRI.

### Rugby Pitch
- Length 140m
- Width 70m

### Football Pitch
- Length 90m - 120m
- Width 45m - 90m

### Dimensions for 11-a-side

When selecting a topdressing you should consider the following:

- **Why are you top dressing?**
- **Do you want to primarily improve drainage?**
- **Do you want to improve the health of the turf?**

Choose a dressing that is compatible with the existing soil type. If in any doubt ask an independent agronomist or consultant.

**Selecting the right topdressing**
How British Sugar Sports & Turf and Lawn Dressing is produced

STRI Statement

Soil scientist Dr Christian Spring BSc (Hons), PhD:

“Sports & Turf is suitable for use on natural soil constructions and offers the advantage of providing nutritional benefit to the turf, as evidenced by turf green-up seen on test plots in Autumn 2016”
The objective of the IOG pitch grading framework is to raise playing surface standards ‘from the Ground Up’

The framework will benchmark the quality of playing surfaces in the UK – complemented by an education framework to help those responsible to continually improve standards.
Sports & Turf

Project details:

Supplied 80 tonnes of Sports & Turf and spread by local contractor Mel Pooley.

Sports & Turf was spread post overseeding, which was carried out using a disc slit seeder to ensure good soil to seed contact. The Sports & Turf has been applied to open up the pitches’ soil profile to improve drainage. Applying post seeding will also protect the seed from birds and help seed germination.

Sports & Turf is a blend of 80% medium and coarse sand with 20% British Sugar TOPSOIL. The sand is predominantly medium to coarse (67%) and sub angular in shape, which assists free drainage and promotes good integration into the surface of the turf.

The soil within the blend contains both phosphorous and potassium, which contributes to soil fertility and encourages healthy growth.

“Mel reported that the dressing flowed through the machine well and spread evenly”
British Sugar TOPSOIL’s Lawn Dressing is a high quality, sand based, multi-purpose dressing, designed for use on lawns.

Lawn Dressing is a blend of 80% medium and coarse sand with 20% British Sugar BS3882:2015 compliant topsoil. Lawn Dressing’s combination of specialist sand and soil is ideal for grass establishment and maintenance.

The sand is predominantly medium to coarse and sub angular in shape, which assists free drainage and promotes good integration into the surface of the lawn. The soil within the blend contains both phosphorous and potassium, which contributes to soil fertility and encourages healthy growth.

Senior Horticulturist at King’s College, Cambridge – Steve Coghill – has been carrying out his own trials with Lawn Dressing on the formal lawns that grace the College grounds. Areas that had suffered from compaction and poor drainage received 40 tonnes of Lawn Dressing in the autumn of 2016 and Steve is delighted with the results so far:

“British Sugar TOPSOIL’s Lawn Dressing is a fantastic dressing, promoting growth and helping improve drainage. It is also an excellent substrate for sports turf renovation and repair.”