Recycling. Never a Waste of Time

Maggie Newton, explains how compost can provide an environmentally sustainable and cost effective solution

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Creating markets for recycled resources

Recent years have seen a transformation in turf management, and one development, which is generating increased interest, is the use of compost as a key component of long-term turf management. Maggie Newton, Marketing and Awareness Manager (Organics), at WRAP (Waste & Resources Action Programme) explains why compost can provide an environmentally sustainable and cost effective solution to many common turf management concerns.

Providing safe, hardwearing and attractive playing surfaces for recreational activities such as golf, requires intensive turf management. Turf grasses are exposed to extensive wear and tear, making them difficult to manage, and liable to soil compaction, poor drainage and turf diseases. Faced with these concerns and mounting pressure to identify materials that are both cost effective and environmentally sustainable, greenkeepers are steadily turning to compost as a material of choice for turf management.

WHY CHOOSE COMPOST?

Compost is a natural product made by composting biodegradable materials under managed conditions. Produced mainly from garden or landscapers' prunings, grass cuttings and leaves, compost is an environmentally sustainable, cost-effective alternative to peat. When used in turf establishment and renovation, compost offers a variety of benefits.

IMPROVING SOIL QUALITY

Perhaps most significantly, compost has the unique ability to improve the chemical, physical and biological characteristics of soils or growing media. Compost supplies organic matter that improves soil structure, water infiltration rates and water holding capacity. It also provides nutrients such as nitrogen to the ground in a slow release form which stimulates turf establishment and 'greens up' grass without leading to excessive grass growth. Compost also provides a good supply of potassium which aids grass hardiness.

Compaction is a key concern in sports turf due to the sheer amount of surface 'traffic', particularly during wet weather. Compacted soil hampers healthy turf establishment by inhibiting the movement of air, water and nutrients within the soil. While traditional methods of alleviating soil compaction are labour intensive, expensive and often only a short-term solution, compost can be incorporated into compacted soils to improve turf establishment and root penetration, providing a more permanent solution. Used in conjunction with aeration techniques prior to adding topdressing, compost can also lead to increased water absorption and drainage and enhanced resistance to pests and disease.

SUPPRESSING DISEASES

Compost can help to suppress many turf grass diseases because it is a biologically active material. Studies carried out on golf courses and sports pitches in the USA and Canada have demonstrated a reduction in the severity and incidence of a wide range of turf diseases such as fusarium patch, red thread and grey snow, particularly when compost was applied as a top dressing or used as a root zone amendment.

QUALITY GUARANTEED

Quality is of paramount importance for greenkeepers when specifying materials for use on their courses. National standards for compost are defined by the British Standards Institution's Publicly Available Specification for Composted Materials (BSI PAS 100), a benchmark which resulted from collaboration between The Composting Association and WRAP in 2002.

The scheme provides independent verification of compliance with BSI PAS 100, which means greenkeepers can be confident that the compost they purchase from producers on the scheme will be high quality, reliable, traceable and safe. Throughout the UK, there are now 41 sites manufacturing compost in line with BSI PAS 100, producing approximately 250,000 tonnes of composted products in a variety of grades.

MAKING THE MOST OF COMPOST USE

When using compost in turf management applications, it is important to ensure that the compost used is of the right quality which is where the BSI standard can provide reassurance. It should not contain any stones or physical contaminants and should be mature so that it helps support healthy turf establishment. The optimum time to spread compost is during the autumn or spring, when the weather is warm and the soil is moist.

To get the most from using compost in turf establishment, it should be applied at 25-50mm deep and then incorporated to an approximate depth of 100-150mm. The compost application rate will vary depending on the soil conditions, compost characteristics, and the turf species to be established. A soil analysis test should be undertaken to establish the quality of the site soil.

Once incorporated, a proper seed bed should be established and the seed lightly brushed into the surface using a drag mat or rake. Turf may be applied directly on to the soil surface either manually, or with specialised equipment. Once planting is complete, the area should be fertilised if necessary and watered on an ongoing basis to ensure adequate rooting.

TOP DRESSING AND DIVOT REPAIRS

Compost can also be used as topdressing for all areas of turf, either as a component of a mix, or on its own. Topdressing with compost is usually more successful when the compost is first mixed with sand as the added bulk density from sand helps the compost to penetrate better. Typical topdressing mixes for

golf courses are comprised of 70% to 90% sand and 10% to 20% organic matter.

Compost can also be blended with various other materials such as sand and loam to produce a product that matches requirements, especially closely mown fine turf and sand dominated, free draining sports turf root zones. When used as topdressing, compost should be applied to the turf surface at a rate of 6mm to 12mm, and should be brushed in and watered if necessary.

A lower application rate of compost should be used on sports turf and lawns, whilst a higher rate should be used on low maintenance grass and roadside verges. Core aeration techniques can also be used and the compost should be moist but flowable to facilitate application.

Divots can also be fixed effectively using a blend of compost and grass seed mix. The compost contains nutrients and holds moisture and the dark colour can also absorb heat from the sun, speeding up germination in cooler periods.

OVER TO YOU

Compost is an extremely versatile product for the greenkeeping sector and there is real potential for an increase in its use. It can provide a solution to many common turf management concerns and at the same time, help greenkeepers to significantly reduce the costs associated with turf management.

Information on where to find your nearest supplier on The Composting Association (TCA) certification scheme can be found at www.wrap.org.uk.

TOP TIPS FOR USING COMPOST IN TURF MANAGEMENT

- carry out a soil analysis test to establish the quality of the site soil
- make sure site drainage is adequate before planting takes place
- if the soil has compacted layers, these may need to be ripped and this should be done when the soil is relatively dry
- ask for a sample of compost before ordering to make sure that it is the required quality
- ask compost producers for a recent chemical and physical analysis
- use the lower application rate of compost on sports turf and lawns and the higher application rate on low maintenance grass and roadside verges
- the optimum time to spread compost is during the autumn or spring, when the weather is warm and the soil is moist

BENEFITS OF COMPOST AT A GLANCE

- Nutrient rich
- Improved moisture retention
- Erosion and weed control
- Increased yielding potential and faster turf establishment
- Better plant survival and growth
- Environmentally sustainable alternative to peat
- Cost effective
- Reduced need for fertilisers and irrigation
- Increased root growth from slow release phosphate
- Improved turf density and colour

NOTES

1. WRAP is a not-for-profit company in the private sector, backed by substantial Government funding from DEFRA, DTI and the devolved administrations in Scotland, Wales and Northern Ireland.

2. Originally established to promote sustainable waste management and create stable and efficient markets for recycled materials and products, WRAP's remit has recently been extended to include a set of new programmes for England. The new work comprises: a Household Waste Minimisation Programme; an Organics Market Development programme to provide material specific support and investment to the composting sector; the development of an Advisory Service to local authorities - the Recycling and Organics Technical Advisory Team (ROTATE); and a Waste Communications and Awareness programme.

3. WRAP has laid down targets across nine programmes - six material streams (paper, plastics, glass, wood, organics and aggregates) and three generic areas (Procurement, Financial Mechanisms and Standards and Specifications).

4. Further information on all WRAP's programmes and activities can be found at www.wrap.org.uk