

Green Waste Composting

Organic requirements are in addition to other statutory requirements
Statutory information is for guidance only and is correct at time of going to print

This Technical Leaflet will explain the process of creating green waste compost and the benefits of applying the resulting material to agricultural land. Statutory and organic regulations will also be covered.

What is compost?

Compost is a natural product, which results from the decomposition of biodegradable materials in a controlled way. Materials can include green waste and food waste, however the statutory and organic regulations for compost that includes food waste are much more restrictive (see TL129) only green waste is covered in this Technical Leaflet. Green waste is generally garden waste and can be sourced from private landscapers and tree surgeons or from Local Authorities.

Why compost green waste?

A gate fee can be charged for input material (feedstock). To encourage a constant supply, the fee is usually set lower than the cost of taking the material to landfill. For 2012, Landfill Tax is set at £64/tonne. Due to the 'Landfill Tax Escalator' the cost of taking material to landfill is set to rise by £8/tonne each year.

Keeping green waste out of landfill sites reduces greenhouse gas emissions and turns waste into a very useful resource. When the compost is applied to land it saves reserves of mineral fertilizer, improves soil structure, increases soil organic matter and water holding capacity. Compost provides slow release nutrients and if applied over several years will gradually build soil fertility. The plant nutrients present in compost will vary according to the inputs. A typical green waste compost will provide the following kg/tonne 7 N, 3 P, 5 K, 2.5 S and 3.5 Mg plus a full range of trace elements. The nitrogen is in a form that is released very slowly, around 5% in the first year. The stabilised (lignified) organic matter has a longer lasting beneficial effect on soils than other material e.g. manure or paper crumb and can be thought of as a carbon sink. Most green waste compost also has a slight liming effect.

The composting process

Usually loads of input materials are weighed before tipping in a reception area. The tipped loads are then assessed for contamination and any plastic or other contaminants removed along with pieces of wood considered too large. If the level of contamination is considered too high the load should be rejected and sent to landfill or removed by the supplier. The material is then shredded by a specialist machine; shredders can be bought or hired. The shredded material is placed in an elongated triangular pile called a windrow. Within a day or so the temperature of the windrow should reach 65-80°C, hot enough to kill weed seeds and pathogens. The windrows should be turned several times to ensure the cooler surface is mixed in. After a few weeks the temperature will begin to drop and the material will then stabilise. Once the compost is stable, between 8-14 weeks, depending on input material and the amount of turning, it is screened; the finished compost being separated from 'oversize'. The oversize can then be used in the next batch and re-shredded or used as biomass fuel.

Permits and planning

Regardless of the size of operation or the end use of the compost, planning permission will be required from your Local Authority prior to setting up the composting site.

You will also need to apply for an Environmental Permit or Exemption from the Environment Agency, if in England or Wales. If in Scotland or Northern Ireland the composting process must have a Waste Management License or Exemption from SEPA or DoE.

PAS100 and the Compost Quality Protocol

Waste regulations apply to the placement on the market, the storage and the use of the finished compost unless the process is certified to the Compost Certification Scheme. The scheme requires compliance to PAS100, the Compost Quality Protocol and the Scheme Rules. The scheme is owned by Renewable Energy Assurance Ltd (REAL). Organic Farmers & Growers are one of the certification bodies contracted to inspect and certify the scheme; see TL301.

PAS100 provides the baseline quality specifications for the process, whilst the Quality Protocol clarifies which materials can be composted and reinforces traceability, reducing any risks to human health and the environment. Once certified the compost becomes a product rather than a waste and environmental spreading permits and deployments are no longer required.

Organic regulation

Green waste compost can be used on organic registered or converting land with approval. A non-GM declaration will not be necessary for green waste compost. The PTE levels must not exceed those listed in PAS 100.

If, as an organic farmer or grower, you wish to use green waste compost, please complete and submit a Record Sheet 9 'Restricted Practice & Material Derogation Application Form', a declaration of the compost inputs (from the producer) and either a copy of the relevant PAS 100 certificate or a copy of the PTE analysis if the compost is 'non PAS'.

To comply with the nitrogen limits in the organic regulation and with NVZ rules, green waste compost should be spread at no more than 30tonnes/Ha.

Useful Contacts

Renewable Energy Assurance Ltd (REAL) 020 7925 3570
www.r-e-a.net

Environment Agency 0800 807060
www.environment-agency.gov.uk

Department of Environment (Northern Ireland) 028 9054 0540
www.doeni.gov.uk

Scottish Environment Protection Agency (SEPA) 01786 457700
www.sepa.org.uk