4R REASSURANCE

Composting and Compost

www.4rreassurance.co.uk

Introduction

Paul Whyatt -Technical Director 4R Group

Composting and Compost

Open air windrow-Green Waste

Composting Process

Regulations

Uses and Benefits

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What is Compost

Aerobic degradation of organic matter

Natural Process

Composters role is to speed this up and control it

Selection of Feedstocks

Shredding

Turning

Screening

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Feedstocks

Green waste

Farm Yard Manure

Wood Chip

Ideally a mix of leafy and woody materials

Needs to have structure

Needs to hold its shape and not be too dry or too wet.

Quality Control of any green wastes incoming crucial

Local Authority Feedstocks

All Source segregated

Education and Quality control key

Separation of contaminants post composting difficult and expensive

Disposal of contaminants expensive

Regulatory burdens

Positive note they attract a gatefee

Green Waste Feedstocks
Good and Bad

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Shredding

Important to give the correct particle size to allow material to compost

Lots of Shredders on the market place they all do three things:

Shred materials

Burn lots of fuel

Break down


CAT


DW-3060 K
Doppstadt

Turning and Aeration

Key to good composting is turning

Introduces oxygen to the process

Keeps the bugs happy

Bugs are the work force in any composting process

Puts all material through the inner hot core of a windrow to give sanitisation- weeds and pathogens

Releases heat

Then allows temperature to reestablish

Monitoring

Time

Turning

Temperature

Moisture

Ideally for green waste minimum of 12 week process- Open windrow

Ideally min of 8 turns

Temperature to reach 65 degrees C for minimum of a week

Moisture- grab samples- crumbly and dusty - too dry. Squeeze water –too wet

Screening

Shredding gives structure

Structure needs to be removed at the end of the process

Screening

- Trommel screens
- Star screen
- Vibrating plate screens

Material needs to be dry to flow through them.

Coarser particles i.e 0-40mm screen easier than a fine grade


621
McCloskey

Finished Product

Standards and Regulation

Incoming green waste is a waste

Permits

Planning consent

Regulators

Once the waste is processed to an “appropriate standard” it then meets the end of waste criteria

PAS 100 and Resource Framework

PAS 100- Sets minimum standards for compost quality

Uses process data and end testing

Feedstock suitability

Time

Temperature

Moisture

Screening

Plant response test

Nutrients

PTES

Contaminants

PAS 100 and resource framework

Resource Framework (formerly Quality Protocol)

Is the legal mechanism agreed between EA and industry of min standards (PAS 100)

Covers field testing and applications

Material must have a market/ use or it falls back into waste status

Benefits of Compost

Organic Matter

Liming effect

Nitrogen

Potassium- lots of

Phosphate

Magnesium and Calcium

Soil structure

Drainage- clay soils

Water holding capacity- Sandy Soils

Workability

Soil Colour

Soil Microbiology

Soil Health and resilience


Questions?
Paul.whyatt@4r-group.co.uk