



Best Practices in Wood Waste Recycling

Quality Specification for Soil Amendments

Material: Wood Waste

Issue: *Clear communication is necessary between wood waste processors and potential purchasers regarding the characteristics and quality of soil amendments made from recycled wood. For soil amendments, the critical characteristics may include:*

- *acceptable wood species*
- *acceptable size distribution*
- *allowable contaminant levels*

Failure to comply with specifications for utilization of wood waste in this application will lead to performance problems and dissatisfied customers.

Best Practice: This best practice recommends that suppliers (processors of wood waste) and potential customers come to a clear understanding of quality requirements for soil amendments. Written specifications should be developed and made available to purchasers of soil amendments, but in many cases these should be viewed as an initial proposal for discussion purposes until specific application requirements can be further defined.

Wood waste processing facilities may already be producing at least two reject streams that would be suitable as soil amendments, depending on the design of their processing system and the nature of incoming materials. The first such product is the fines that may be initially screened from incoming materials, which again depending on the nature of the incoming materials may be heavy in soil and/or may contain a variety of contaminants. The second product is the fines removed in a later step by screening the processed material, which generally would be higher in organic content and possibly contain less contamination due to intermediate screening steps and magnetic removal of ferrous metals (nails, etc.). If either of these reject streams are to be marketed, they must be properly prepared and potential buyers/end-users informed of their limitations. Again depending on the design of the facility and nature of incoming materials, there may also be a reject stream of non-processable material (brick, rock and concrete) that might meet local standards for clean fill. Finally, the main product of a facility may also serve as a soil amendment, although this would generally entail downgrading its value and screening to a smaller size.

The following is a general specification for a wood waste derived soil amendment. This specification provides a starting point for communications, as adjustments may be necessary to tailor the product to the actual application. In general, larger-sized material is more suitable for situations where it will be included in a composted mixture or where long-term benefits outweigh the short-term needs.

Wood Species

Acceptable species include most types of wood, with the exception of phytotoxic (growth-inhibiting) species such as Cedar and Black Walnut. In addition, species such as Cedar may resist decay, which typically would be undesirable. The potential for impact of certain species on soil pH is also a consideration.

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Size Distribution*

- Length: max. 2" (50 mm)
- Overs: (> 2"), max. 5%
- Thickness: max. 1 1/2" (38 mm)
- Overs: > 1 1/2" (38mm), max. 5%
- Width: same as thickness
- Fines: (< 1/4" or 6 mm), max. 20 to 100%
- Dust: Varies

*Size requirements may vary depending on the schedule for future use of the soil being treated, but in almost all cases a relatively small-sized material will be preferred.

Maximum Allowable Contamination Levels

Rot:	20-100%	Wood with laminates:	0%
Bark:	5 - 10%	Plastics:	0%
Dirt, rock, sand:	1 - 10%	Painted wood:	0%
Metals:	0%	Treated wood:	0%
Plywood:	0 - 5%	Other non-wood materials:	0%
Particleboard:	0 - 25%**		

**Particleboard is a potential source of nitrogen, but aesthetic considerations may limit use.

Implementation: An examination of a facility will determine whether a product or reject stream suitable for a soil amendment is being produced. Local needs for soil amendments should be carefully evaluated, possibly even using test marketing or pilot projects if serious concerns exist about the viability of local markets. Finally, the potential for local partnerships with sewage treatment plants, generators of animal manure, food waste processors, and other sources of high-nitrogen and compatible feedstocks should be assessed for the potential to create blends or mixes with higher value. Mixing a fine-grained wood waste or sawdust with sewage plant solids (biosolids), animal manure and/or residential yard wastes is an approach working well in many areas.

Benefits: Soil amendments produced from wood wastes can provide long-term benefits to soil properties for various soils, but can be especially beneficial for heavy (high-clay) soils, sandy soils, and other soils that are impoverished or low in humus (organic) content.

Application Site: This Best Practice applies to wood waste processing facilities.

Contact: For more information about this Best Practice, contact CWC, (206) 443-7746, e-mail info@cw.org.

References:

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2. Hlavka, Rick. Green Solutions, South Prairie, WA.
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4. Rodale, J.I. *The Complete Book of Composting*. 1974.

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