



Best Practices in Wood Waste Recycling

Quality Specification for Animal Bedding

Material: Wood Waste

Issue: *There are several areas of the country where the market is fairly well established for wood shavings and/or sawdust as livestock bedding. Sawdust and wood shavings typically compete with straw and newsprint bedding. In some areas, straw is becoming less available as farmers change their planting practices. In some parts of the country, shredded old newspaper bedding is increasingly used in place of straw. Although the supply cost of old newspapers is low at times, it also can be quite high at times, making the viability of this bedding feedstock somewhat conditional. Because most animal bedding sales are made directly between the producer and the user, the costs are considered wholesale rather than retail. The purpose of animal bedding is to supply an absorbent cushion for the animal. The use of wood waste for animal bedding poses the potential concern about contaminants not fully removed from the wood waste. Another concern is that certain wood species may cause severe reactions in some animals.*

Best Practice: The potential use of wood waste for animal bedding involves the sale of either sawdust or wood shavings as opposed to shredded or ground material originating from operations like hammer-mill grinding. The production of a sawdust or small fines from shredded wood waste can be used in animal bedding. It usually involves double grinding the waste wood in wood hogs with an air-conveying system, which helps drop out the oversized and/or tramp contaminants. The use of several stages of magnetic recovery systems can also be utilized for tramp metal recovery.

Implementation: Animal bedding is used primarily as an absorbent and to help with the collection and removal of manure and urates from stalls and pens. Wood waste has been used for litter in various forms including planer shavings, chips, sawdust and shredded wood. The primary characteristics of the wood-waste form that plays a role in its potential use include the moisture content, size and quantity of non-wood contaminants in the bedding material. The ability to absorb liquids is the key characteristic of the bedding decision. Kiln-dried wood, with a moisture content of 15% or less, that has been used and generates residues as shavings and sawdust provide the greatest absorption capability. Freshly cut timber that may have up to a 50% moisture content, has minimum additional retention or absorption capability. This latter material may also cause mold and mildew to form. Animal bedding cannot contain additional tramp metals (such as nails, screws, etc.) nor can it contain chemical contaminants. Some animals, such as poultry, are reported to obtain 4% of their feed from eating their bedding material. Operators of livestock facilities are interested in knowing the source of their bedding and want to be assured that it is produced only from clean, untreated wood.

Several manufacturers are capable of providing equipment for the size-reduction steps needed to produce animal bedding. However, wood-waste processors must conduct the appropriate field market evaluation to understand the size, shape, and quantities that the regional market desires before investing in this equipment. Often, local woodworking operations have planing and sawdust waste as a business

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byproduct. These businesses are in a good competitive position and do not need additional equipment or labor. Also, when traditional paper market prices are down, the waste paper suppliers can sell to and expand into the animal bedding business as a buffer market outlet. Waste paper is periodically, a low cost competition to wood waste for animal bedding.

Benefits: The possibility of adding an additional market outlet for processed wood waste is the primary benefit. The material would be a substitute for straw or other more expensive wood-based bedding material that may be used. However, there is strong competition with recycled newspapers in this marketplace, especially when its market value is depressed. This situation will probably continue to play an important role in the marketplace as paper prices fluctuate with world demands.

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:

1. Carpenter, Dr. Gary L. American Association of Equine Practitioners, Lexington. KY.
2. Wood, Dr. Mark. Animal Health Institute, VA.
3. "Replacing Nature's Bedding." Horse Industry Handbook. American Youth Horse Council, Inc. 1993: 2 Pages.
4. "Uses for Sawdust, Shavings, and Wood Chips," USDA Forest Service Research Note, Forest Products Lab, Madison, WI. November, 1969.
5. Aaron, J.R. "Wood Chips As Litter For Cattle and Poultry," Quarterly Journal of Forestry, 59(2): 169-172.

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