RECYCLED NEWSPAPER FOR ANIMAL BEDDING
Safety and Processing

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Is Newspaper Safe to Use for Animal Bedding?

There is some concern about the toxicity of chopped or shredded paper when used for animal bedding. Toxic materials are those that may contain harmful substances in sufficient quantity to pose a hazard to human or animal health. The standards used to determine toxicity are defined by the National Institute of Occupational Safety and Health (NIOSH), using results of laboratory tests on animals which are then standardized for human exposure. Safe exposure levels are usually higher for animals than for humans.

It is important that only clean newspapers be used for animal bedding. Newspapers soiled with paints, solvents, oils, grease and other materials should be separated and never be used for animal bedding.

Newsprint Inks

Carbon black is the standard pigment used for black ink for newsprint. Additional ingredients are oil, miscellaneous ingredients for anti-misting and low-rub and paraffin distillates for quick dry. Colored inks usually contain pigments for color rather than carbon black. The black inks now used for newsprint in the US do not contain toxic ingredients.

The colored and slick type inserts present in many newspapers should not be used for animal bedding. Many of the inserts, including the magazine type thicker ones, are often printed overseas and the ink ingredients are not fully known in this country.

Inhalation

Inhalation of ink is a concern only when ink is in liquid form at the place of production or when particle droplets and evaporation of active ingredients occur during the printing of newspapers. Inhalation of fibrous material and dust is possible when chopping or shredding newspapers, so appropriate dust masks should be worn. More dust and fibrous material is likely as paper is chopped or shredded into finer pieces.

Ingestion

Ingestion of inks used on newsprint is not a concern because the ingredients used in inks are not considered toxic in either the liquid or dry form. In paper bedding trials the only animal showing an inclination of eating newspaper bedding was a horse and the amount ingested was very small.

How to Process Newspapers for Animal Bedding

Shredders

Newspaper can be chopped or shredded with various machines. Commercial shredders that produce long, slender shreds are historically more common, but this type of shredded paper is not the most desirable for animal bedding. The long shreds cling to animal’s feet and are tracked around more than chopped paper. The paper shreds also tend to ball up and clog chain-drive gutter systems. Shredded paper does bale better with more retention in the bale than chopped paper.

Choppers

Various types of bale choppers, straw choppers, bedding choppers and forage choppers may be used to process paper. Chopped paper is retained in dairy stalls better than shreds and is not tracked around as much by the animals. Chopped paper is not very uniform in particle size, but has more absorbency than shreds. Chopped paper can be baled reasonably well with regular hay balers into 40-80 pound bales. At least one machine is now available that both chops and bales newspaper. Paper chopped in a 2 to 3 inch particle size, which seems to be the preferred size for
animal bedding and poultry litter, does not bale as well as larger pieces, is not retained as well in the bale, and hence, is more difficult to manage and handle.

Chopping and Distributing

Engine powered push type machines are available to chop and distribute paper in dairy stall barns and broiler houses. Larger 3-point hitch tractor PTO powered machines are also available to chop and distribute paper bedding. Many models use sickle-bar mower knives for the cutting head. These knives must be kept sharp for efficient chopping. Newspaper appears to dull knives more quickly than straw.

Forage Choppers

Forage choppers with a multiple knife cutter head work better than single blade cutter heads. For safety reasons, forage choppers must be modified by adding a feed chute or conveyor to feed paper into the cutter head so the operator is not in close proximity to the cutter head. Paper particle size when hand feeding in a forage chopper is controlled more by the paper feed rate rather than by cutting head speed.

For more efficient baling, chopped paper from the forage chopper delivery pipe should be fed directly into the bale chamber with the use of a flexible tube or blower pipe. This also reduces considerably the amount of scattered paper around the baler. Forage choppers are not suitable for distributing paper in buildings.

Balers

The pickup unit on hay balers should be disconnected or removed for baling paper. Most balers will work better with the auger feed unit also disconnected or removed, and the chopped paper fed directly into the bale chamber. Top feed balers work better for paper baling. Bale tension must be closely observed, especially if the paper feed rate is not steady.

Availability of Newspaper for Animal Bedding

About 30,000 tons of newsprint is presently generated in West Virginia with about 6,000 tons recycled into paper and 8,000 tons used for other purposes or disposed of in other ways. The remaining 16,000 tons is mostly dumped into landfills. Complete collection, recycling and utilization of all the paper beyond that presently recycled into paper would result in 24,000 tons available for animal bedding, poultry litter, mulch and other recycled uses.

The availability of newsprint in the future for animal bedding may change as more plants to de-ink and recycle newsprint into paper are put in operation. Newspaper availability for recycling into animal bedding is expected to be more favorable in rural areas. Newspaper availability, including long-term, should be a major consideration before investment in paper processing machines and systems.

References:

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Recycled Paper

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