



B.C. MINISTRY OF AGRICULTURE & LANDS

WOODWASTE USE: PRECAUTIONS TO HORSE OWNERS

Horse owners use woodwaste extensively for riding arenas, stable bedding, turnout paddocks, high traffic areas and for footing on riding trails or paths. It is acceptable for horse owners to use woodwaste on horse operations but water contamination must be prevented. Under the "Waste Management Act" the BC Ministry of Environment, Lands and Parks (MELP) has the authority to make any land owner remove woodwaste deposits that are causing pollution. This includes deposits of woodwaste used as a landfill, soiled woodwaste piles and riding arenas that have had contours filled or land levelled using woodwaste in excess of MELP Guidelines.

WOODWASTE AND THE CODE OF AGRICULTURE PRACTICE

The "Code of Agriculture Practice for Waste Management", under the "Waste Management Act", defines woodwaste as follows: Woodwaste includes hog fuel, mill ends, wood chips, bark and sawdust, but does not include demolition waste, construction waste, tree stumps, branches, logs or log ends.

All woodwaste, particularly woodwaste that contains softwood residues from western red cedar, will produce leachate when exposed to rainfall or irrigation. This leachate can be toxic to the environment and is classed as a pollutant. Therefore, uses of woodwaste which result in the generation of leachate which could escape to the environment and cause pollution must be avoided.

WOODWASTE USE

The use of woodwaste in agriculture is acceptable as long as it is used for: plant mulch, soil conditioner, ground cover, on-farm access ways, livestock bedding and areas where livestock, poultry or farmed game are confined or exercised, berms for cranberry production,

or as fuel for wood fired boilers.

WOODWASTE STORAGE

Woodwaste stored and used on a farm must be handled so as to prevent any escape of particulate or solid matter from the woodwaste into the air, or particulate or solid matter or leachate from the woodwaste into any watercourse or ground water that causes pollution.

Woodwaste used on a farm must not be used for landfill, or on sites within 30 meters of any source of water used for domestic purposes.

The key to all sections of the code as it pertains to woodwaste, is that it does not allow the use of woodwaste if that use causes pollution.

OTHER GUIDELINES AND REGULATIONS

The "Waste Management Act" for British Columbia has a permit provision for the use and disposal of woodwaste. Most agricultural uses are exempt from a permit as long as they meet the Code of Agricultural Practice and the Regional Waste Manager is reasonably satisfied with the use.

Environment Canada and the Department of Fisheries and Oceans have prepared a technical draft report covering the use, transport, storage and disposal of woodwaste as it pertains to the protection of fish and fish habitat.(DOE/DFO FRAP Report 95-18)

The "Soil Conservation Act" has provisions for the control of woodwaste use on agricultural land. A permit is not required if the woodwaste application does not exceed 30 cm (12") and which are easily incorporated into the soil. Municipal Bylaws may also restrict the use of woodwaste.

To date, a definitive set of guidelines for the storage and use of woodwaste in agriculture are in place. Environmental Guidelines for horse owners in BC that support the "Code of Agricultural Practice for Waste Management" are available. These guidelines contain information on the proper use, handling and storage of woodwaste. Contact Horse Council BC for a copy of the Environmental Guidelines for Horse Owners in BC.

CHARACTERISTICS OF WOODWASTE LEACHATE

Woodwaste leachate is typically a black, strong smelling, foamy liquid with a high chemical and biological oxygen demand and a high toxicity to fish when it enters water. It usually contains lignins, tannins and tropolones which are toxic compounds. The leachate is generally acidic and has a high reserve acidity (buffering capacity). It creates an iridescent (oily) slick on water it enters into and may have a sweet industrial or petroleum odour. Due to its colour, which is black rather than the tea brown colour of peat water, woodwaste leachate screens the passage of light into water. Light and oxygen are essential to the production of aquatic plant production and fish rearing.

The impact of woodwaste leachate is more severe on watercourses such as small streams and ditches that are distant from main water bodies like the Fraser River. These small watercourses often have low flow levels and are critical fish habitat for rearing and growth of fry. Therefore, horse operations, which are located near watercourses, **must use woodwaste with caution**. Although minimum setback distances are not presented in any regulations or codes of practice, a setback of 15 meters has been suggested as being potentially acceptable, where practical, based on site conditions. Natural attenuation may aid in the treatment of woodwaste leachate. However, it is not likely to be successful for the large volumes of leachate generated as a result of the high rainfall conditions which are experienced in this area on most farming operations in South Coastal British Columbia.

Woodwaste leachate can also cause contamination of irrigation and drinking water. Consumption of drinking water contaminated with woodwaste leachate can result in human illness, hence the 30 meter setback from a source of water used for domestic purposes as outlined in the "Code of Agricultural Practice for Waste Management". Irrigation with water contaminated with woodwaste leachate can lead to damage and discolouration of fruit and plants. Woodwaste leachate in combination with other suspended or dissolved solids may form slimes in horse watering units.

As good stewards of the land, horse owners must handle woodwaste in a manner that minimizes the impact on the environment.

Take the following precautions:

- Depth of application maximum of 15 cm (6")/yr.
- Maximum of 45 cm (18') total depth.
- Only use woodwaste for animal bedding, ground cover, equestrian facilities, on-farm access ways, as plant mulch or soil conditioner.
- Never use woodwaste for landfill.
- Never deposit woodwaste directly into a watercourse.
- Do not use woodwaste products within 30 meters (100 ft) of a domestic water intake including a well.
- Do not utilize woodwaste within 10 meters or (30 ft) of the property boundary.
- Do not deposit woodwaste within 1 meter or (39 in) of the highest groundwater level.
- Fill out a Woodwaste Discharge Information Sheet. If more than 50 cubic metres (1765 cubic ft) of woodwastes are used, or; if woodwaste is used within 30 metres (100 ft) of a water course and forward the sheet to BC Environment. If the regional manager is satisfied following a site inspection that no pollution hazard exists, an exemption or permission may be granted.
- When storing fresh shavings or hog fuel, tarp woodwaste or store in shed.
- Do not use woodwaste in place of drain rock for subsurface drainage.
- Prevent the release of leachate into surface water or groundwater. Leachate must be contained.

For more information please contact:

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