

Environmental FACTSHEET



BRITISH
COLUMBIA

Ministry of Agriculture and Food

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WOODWASTE USE IN AGRICULTURE - Precautions -

The Code of Agricultural 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 then classed as a pollutant. Therefore, uses of woodwaste which result in the generation of leachate that could escape to the environment and cause pollution must be avoided.

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, farming operations, particularly those growing nursery stock, blueberries and cranberries or having equestrian riding facilities, 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 on most farming operations in South Coastal British Columbia, as a result of the high rainfall conditions which are experienced in this area.

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 in the Code of Agricultural Practice. Irrigating with water contaminated with woodwaste leachate can lead to damage and discolouration of fruit and plants. Woodwaste leachate in combination with other suspended solids may form slimes that can plug trickle irrigation systems.

WOODWASTE AND THE CODE OF AGRICULTURAL PRACTICE

Woodwaste Use

The use of woodwaste in agriculture is accepted so 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 permit provisions 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.

The Soil Conservation Act has provisions for the control of woodwaste use on agricultural land. The provisions limit the amount of woodwaste that can be applied to a maximum depth of 30 centimeters. 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 not in place. Environmental Guidelines to support the Code of Agricultural Practice for Waste Management are being prepared for each commodity operating in British Columbia. It is expected that these guidelines will contain information on the proper use, handling and storage of woodwaste.

FOR FURTHER INFORMATION, CONTACT:

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