

## Use Caution When Bringing Non-Agricultural Waste or Products Onto Your Farm!

In British Columbia the **Waste Management Act** is the law which controls the use and disposal of wastes. Farmers should be aware that, by law, once a material is classed as a waste it remains classed as a waste. There is no question that some materials can be beneficially reused as fertilizers, soil conditioners or feed. Manure from a dairy farm is a good example. It is classed as an 'agricultural waste' under the **Waste Management Act**, but with proper storage and handling it can be used as a very effective fertilizer for forage crops. The **Code of Agricultural Practice for Waste Management** (BC Regulation 131/92) (**Code**) provides an exemption from requiring a waste management permit if the manure is used as a fertilizer or soil conditioner, and the farmer follows the **Code**.

The Agricultural Land Commission allows the use of manure and other agricultural wastes on farms if they are used in accordance with "good agricultural practice". If manure is not used in accordance with good agricultural practices or if other wastes from off the farm are used on the farm an approval is required under the **Soil Conservation Act**.

### What are Non-Agricultural Wastes or Products?

These are materials which do not have an agricultural origin or have not been specifically designated for agricultural use.

The most common examples of non-agricultural wastes familiar to the dairy industry are woodwaste and whey.

**Woodwaste** Woodwaste, i.e. sawdust, chips or hog fuel, is a material that has been found to be acceptable for use as bedding or in exercise corrals (as described by the **Code**).

**Whey** Whey is the by-product of cheese production and is recognized as having feed value. When fed to livestock no authorization is required from BC Ministry of Environment, Lands and Parks (BCMELP). However, if whey is to be applied directly to land (or mixed with manure and applied to land), this use (application to land) must be authorized by BCMELP.

### What about other materials?

Farmers may be aware of other waste materials that have been, or are currently, used on farms in BC. Most of these waste materials are derived from the food processing industry. Many of these wastes have high feed value i.e. canola meal or brewers mash.

Canola Meal	Canola meal is a waste or by-product of the vegetable oil industry. It is a product used as feed or feed supplements for a range of livestock. It does not require a permit for this use and is accepted as a “normal feed” under the <b>Canada Feeds Act</b> . However, if canola meal were to be disposed of onto land, an authorization from BCMELP would be required.
Paunch Manure	<p>Paunch Manure is the manure from the guts of slaughtered livestock, even extracted from agricultural animals it is not considered to be an agricultural waste. Because this manure is considered an institutional or commercial waste, an authorization under the <b>Waste Management Act</b> is required if it is applied to land.</p> <p>Paunch manure may be used in a composting operation if that operation is covered under the <b>Production and Use of Compost Regulation</b> (BC Regulation 334/93). Farmers should note that if the composting operation composts non-farm waste and is located within the ALR authorization for the composting operation and use of the compost is required under the <b>Agricultural Land Reserve Act</b> and <b>Soil Conservation Act</b>.</p> <p>Other wastes associated with agriculture may still require approval for use back to agriculture. Check for more information on the regulatory requirements before using these materials.</p>

### **Bedding Materials derived from Waste**

In recent years, some farm operations have looked to other sources of bedding. For example, in the South Coastal Region, one dairy operation is looking at the use of residuals from newspaper recycling as a source of bedding. Others have tried to use paper from ground gyproc wallboard.

Waste Paper and Pulp Sludge	<p>Waste paper and pulp sludge describes materials that are the by-product or waste generated from either the pulp, paper or waste paper recycling industries. The case has been made that these materials should be considered as organic matter that can be beneficially used as a soil conditioner. However authorizations under the <b>Waste Management Act</b> control their use due to concerns over contaminants such as inorganic substances (metals), and organic compounds (dioxins, phenols and poly aromatic hydrocarbons). These contaminants can render the material useless to agriculture or seriously limit the amount that can be brought onto a farm.</p> <p>This requirement for a Permit or Approval covers newspaper, deinked paper sludge and paper stripped from gyproc wallboard. The application of any of these materials to land in the ALR must further comply with the <b>Agricultural Land Reserve Act</b> and <b>Soil Conservation Act</b>.</p>
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### **What are the Current Concerns?**

Two recent occurrences of non-agricultural waste application to dairy farms in the Lower Fraser Valley have prompted BCMAFF to issue this Information Sheet. The first was the reported use of fly ash as a replacement for hydrated lime in a blend with shavings on the floor of free stalls. The second was the introduction of a liquid waste from an organic waste recycling facility into manure pits.

## Fly Ash

The use of fly ash as a lime replacement to kill *Klebsiella* species (mastitis control) has been reported in Hoard's Dairyman (October 10, 1999). In the article, a red flag was raised with respect to the classification of the material. The Toxic Substances Control Branch of California Health Services has classed fly ash as a hazardous material.

**Depending on the source, BC Ministry of Environment, Lands and Parks considers fly ash to be a Special Waste. Fly ash should be analyzed to determine if it should be treated as a Special Waste. Use of fly ash on farms in BC is not permitted unless an authorization is obtained under the *Waste Management Act*.**

Fly ash is the material collected from the flue gases in industrial chimneys. These ashes may be derived from the combustion of a range of materials including wood, coal, Municipal Solid Waste (garbage) or other industrial materials. Fly ash contains elevated concentrations of heavy metals in oxide forms, silicate materials and calcium. The ash is normally a very fine respirable powder (less than 10 microns) which will cause damage to human or animal lungs. It also has a pH greater than 12.0. Depending on the source of combustion materials, the ash is likely to contain either metals or organic compounds (dioxins or furans). None of these properties make it very useful as a soil amendment.

## Liquid Waste from Organic Waste Recycling Facility

Over the summer of 1999, several farms accepted liquid waste from an organic waste recycling facility that had been shut down due to a plant failure. The facility was designed to receive a range of organic materials from food processing and other sources. The materials that entered the plant are classed as a waste under the ***Waste Management Act***.

Because of the plant failure, some processed and unprocessed wastes had to be diverted to other end uses. Waste was shipped to several dairy farms. Farmers accepted this waste on their farms for use as a "soil conditioner". These farmers are now faced with expensive analysis of the manure-waste mixture and getting an approval under *the Waste Management Act* to spread the waste on their farms.

The issue here is not the details of this case, but the need for farmers to be aware that they must demand to see the authorization, source and characteristics of any material that is being promoted as a fertilizer, soil conditioner or feed supplement. The reasons for knowing the characteristics of the material, and getting approval to use it, are both the real and potential toxicity of the material to plants and animals.

## Your Responsibility

- Do not rely on verbal assurances that a material has approval for use as a fertilizer, soil conditioner, feed additive or any other reported use.
- Wastes may contain a wide range of non-organic (i.e. metals, excessive nutrients or salts) and organic compounds (i.e. hydrocarbons, oils, dioxins or furans).
- Ask for written documentation of the quality and chemical characteristics of the material, product or waste. If you are unsure, ask for a copy of the authorization or labeling which indicates the product can be used for the claimed use.

## Your Responsibility (continued)

- Various government regulations set out criteria for the acceptable levels of these compounds in wastes. Protection of human and animal health and the environment, are the main reasons for these regulations.
- It is the responsibility of the producer of the waste, not the farmer, to determine if the material meets the quality criteria for its intended end-use. If you are unsure of whether the material is a waste or are unsure if you should use it, don't!
- Taking waste may not contravene the Waste Management Act. However, spreading without a permit can and has led to charges for introducing a waste into the environment without an authorization under the Act.
- Application of wastes may also require an application to the Provincial Agricultural Land Commission regardless of an authorization under the Waste Management Act.
- It is important to note there are other Provincial and Federal Acts and Regulations that cover the use or importation of products onto farms that have not been mentioned in this article

## For more information on waste utilization or authorization for use of various waste materials contact:

### BC MINISTRY OF ENVIRONMENT, LANDS AND PARKS

- Dial ENQUIRY BC at 1-800-663-7867 and ask to be put through to the Regional Waste Manager at the nearest BC Environment Office (Offices are located in, Surrey, Nanaimo, Kamloops, Nelson, Smithers, Williams Lake and Prince George)

### BC MINISTRY OF AGRICULTURE AND FOOD

- Contact your local District Agriculturist
- Resource Management Branch, Abbotsford, (604)-556-3100 or 1-888-221-7141 (Ask to speak to Geoff Hughes-Games, PAg, Provincial Soil Specialist or Rick Van Kleeck, PEng, Provincial Waste Management Engineer)

### LAND RESERVE COMMISSION (Agriculture and Forest Land Reserves)

- Trevor Murrie, PAg, Staff Agrologist (604) 775-2536, Burnaby

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A Task Group, set-up under the Partnership Committee on Agriculture and the Environment, is working to develop a list of materials and their uses that could be deemed to have some acceptable use on agricultural operations. Most of these will be materials that are not currently covered by regulation.

Note: **Production and Use of Compost Regulation** is going to be replaced in the near future with the "Organic Matter Recycling Regulation" and the requirements with respect to use of various agricultural product processing wastes in composting will change.

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### FOR FURTHER INFORMATION, CONTACT:

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### RESOURCE MANAGEMENT BRANCH

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