

FACTSHEET 4 Composting Solid or Semi-solid Wastes

JULY 2011

Code of Practice for the Slaughter and Poultry Processing Industries

Frequently Asked Questions (FAQs)

Q. Who does this Code of Practice apply to?

A. This Code applies to operators that slaughter and sell poultry or red meat for human consumption <u>and</u> produce wastes that may be discharged to the environment.

An example of a waste discharge to the environment is burying solid or semi-solid wastes in an on-site landfill. Do not register under this Code if your solid or semi-solid wastes are picked up by a rendering company, or brought to an authorized municipal landfill.

Exception

If you slaughter livestock or poultry strictly for your personal consumption and not for sale, or produce less than 5 tonnes of live weight killed (LWK) red meat per year, or less than 1.5 tonnes of live weight killed (LWK) poultry meat per year from your farm slaughter facility, you are exempt from the requirements of the Code and do not need to register. You are still required to ensure that your activities do not harm the environment.

5 tonnes (5,000 kgs.), is approximately 8 cows, 179 goats, 91 sheep, or 50 hogs. **1.5 tonnes** (1,500 kgs.), is approximately 708 chickens or 136 turkeys. These animal numbers are <u>estimates</u>, <u>based on average</u> animal weights. Actual weights should be used, if possible, to determine whether or not your facility meets the exemption threshold.

Q. What if I already have a permit authorizing my waste discharges?

A. You may keep your permit and continue doing business (following your permit requirements), or you may choose to cancel your permit and register under the Code.

1. Introduction

If you operate a red meat or poultry slaughter facility (also called an abattoir), you produce solid wastes: feathers, hides, offal, bones, carcasses or parts of carcasses, and liquid waste, or wastewater. If the blood, fats, oils and grease are separated from the wastewater, these are termed semi-solid wastes and may be disposed of in a similar manner as the solid wastes.

The Code allows solid or semi-solid wastes to be disposed of by landfilling, incinerating, or composting and land applying the compost product. Depending upon the quantity of waste produced, composting of solid and semi-solid wastes from slaughter facilities is regulated by two regulations under the *Environmental Management Act*.

The Code of Practice for the Slaughter and Poultry Processing Industries (Code) under the Waste Discharge Regulation (WDR) allows composting of up to 30 tonnes of red meat waste or up to 10.5 tonnes of poultry processing waste, per year, on agricultural operations. You can download a copy of the Code, obtain registration information, as well as access background information by following this link:

http://www.env.gov.bc.ca/epd/industrial/regs/code s/slaughter/index.htm.

If you are composting over 30 tonnes of red meat waste or over 10.5 tonnes of poultry waste, per year, from your slaughter facility you must continue to follow the requirements under the Organic Matter Recycling Regulation (OMRR). You can access more information about the OMRR by following this link:

http://www.env.gov.bc.ca/epd/codes/omr/ index.htm **30 tonnes** is the waste from approximately 95 – 99 cows. **10.5 tonnes** is the waste from approximately 18,000 – 20,000 chickens. These animal numbers are <u>estimates</u>, <u>based on average</u> animal weights. Actual weights should be used, if possible, to determine whether or not your facility meets the exemption threshold.

This factsheet is intended to assist slaughter facility operators in understanding the composting requirements under the Code. For legal purposes, the *Environmental Management Act*, the Waste Discharge Regulation, the Code and the Organic Matter Recycling Regulation (OMRR) shall prevail.

Other provincial and federal legislation, guidelines and best management practices that are not described in this document may also apply to slaughter operations. For example, the Canadian Food Inspection Agency (CFIA) has regulations for the handling of specified risk material (SRM) that producers, transporters and processors must follow. See their website at:

http://www.inspection.gc.ca/english/anima/heasan/ disemala/bseesb/enhren/enhrene.shtml.

The Provincial Agricultural Land Commission (ALC) also has requirements for the handling of red meat wastes and SRM within the Agricultural Land Reserve. For further information see their bulletin at:

http://www.alc.gov.bc.ca/Information%20Bulletins/ Red Meat Waste info sheet.pdf.

2. Docking stations for mobile abattoirs

Docking stations for mobile slaughter facilities must follow the same requirements as fixed facilities. The person discharging the waste is required to register under the Code. This may be the docking station operator or the mobile facility operator. In most cases, if will be the docking station operator, because the mobile facility operator would have to register each site where they operate.

3. Registration and Recording Requirements

If you operate a slaughter facility that introduces wastes to the environment, you must:

 Register with the Ministry of Environment (MOE). Registration forms are available online via the following website link:

http://www.env.gov.bc.ca/epd/industrial/regs/code s/slaughter/index.htm.

Forms can be filled in on screen and printed, or printed then filled in, or obtained from the Regional MOE office, and sent by registered mail, courier or fax to MOE permit administration in Victoria together with payment of the annual fee.

 Keep records of your annual production (in tonnes of live weight killed meat per year). If you are unable to weigh live animals, you can estimate live weight from carcass weight using Table 1.

Table 1 Carcass Weights as Percentage of Live Weight	
Species	Carcass Weight
Cattle and Bison under 30 months	50 % of live weight
Cattle and Bison over 30 months	40 % of live weight
Hogs	55 % of live weight
Sheep and Goats	60 % of live weight
Poultry	74% of live weight

Van Kleeck, R., Investment Agriculture Foundation, 2006

- Keep records of how the solid or semi-solid wastes are disposed of (e.g., composting, and landfilling or land application).
- Confirm that any plans that may be required under this Code have been prepared (e.g., nutrient management plan).
- Keep all required records and plans for at least 10 years and make them available to an officer upon request within two days.
- Notify a director in writing within 30 days after there is any change in information provided in your registration.

4. Composting Requirements

There are minimum time and temperature requirements for composting and curing of solid and semi-solid wastes to produce a beneficial product for land application on the farm. The composting pile must be raised to a temperature of 40 degrees Celsius or higher and maintained for a minimum of 5 days. During the 5-day period, the temperature must exceed 55 degrees Celsius for 4 hours. This is achievable if the pile is aerated. There are a number of methods for aerating the composting pile (see the Technical Guideline for more details).

Once these temperatures and time periods for composting have been met, the piles must be retained in curing piles for a minimum of 21 days, to allow the compost pile to stabilize, and the curing pile must not re-heat to greater than 20 degrees Celsius above the ambient temperature, where the ambient temperature is between 5 degrees and 30 degrees Celsius.

Specified Risk Material (SRM)

For red meat slaughter operations, you may have specified risk material (SRM). If the SRM is not separated from the solid or semi-solid wastes as per CFIA protocols, all the waste would be considered SRM. If you compost the SRM to reduce the volume prior to landfilling, or for land application, the compost is still considered to be SRM, and is restricted on where it may be land applied. SRM compost must not be land applied on land growing crops for human consumption, and domestic animals must not be grazed for five years on the land applied with SRM compost.

The composting and curing piles must be located on an impermeable surface, and be 15 metres away from any watercourse, and 30 metres away from any domestic water source.

During the composting and curing processes, and when storing the compost product, slaughter facility operators must take measures to prevent the formation of leachate, or the escape of waste or leachate, prevent attraction and access of wildlife and vectors, and control fugitive dust and odours resulting from these activities.

5. Nutrient Management Planning

A nutrient management plan (NMP) must be prepared for the beneficial use of the compost product as a fertilizer or soil conditioner. A nutrient management plan is used to calculate an application rate for the compost product. The NMP should take into account the level of nutrients in the compost product, any other fertilizing materials that may be applied, and the residuals in the soil of the land application site to calculate an application rate based on the crop's requirements.

The slaughter facility operator may choose to have the NMP prepared by a Qualified Professional, or may use the information and guidelines developed by the Ministry of Agriculture, which can be found at the following link:

http://www.agf.gov.bc.ca/resmgmt/NutrientMgmt/

6. Land Application - Soil Sampling and Testing

Prior to land application, the soil of each land application site must be sampled using appropriate methods, and tested for levels of nutrients. Land application sites greater than 10 hectares must be subdivided into areas of 10 hectares or less.

One year after the first application of the year, the soil for each land application site must be sampled and tested, and every 3 years thereafter, for as long as land application on the site continues.

7. Compost Product Sampling and Testing

The compost product to be applied must be sampled and tested for levels of nutrients (section 25 & 26 of the Code). The results are to be used in the nutrient management plan (NMP), along with the crop nutrient requirements, to calculate the application rate for applying the compost product. More detailed information is available in the Ministry of Agriculture's Nutrient Management Reference Guide, at the following link:

http://www.agf.gov.bc.ca/resmgmt/NutrientMgmt

and, specifically about sampling solid manure, at:

http://www.agf.gov.bc.ca/resmgmt/publist/600Serie s/631500-3 Manure Sampling.pdf,

or in the Technical Guideline (to be linked).

8. Land Application Requirements

When land applying, a person must

- ensure the compost product is not directly discharged into surface water or groundwater, and
- follow the required control measures in the Code.

As well, following <u>Beneficial Management Practices</u> for soil amendments, also found in the Canada-British Columbia Environmental Farm Planning Program is good due diligence.

9. Annual notification

Thirty days before the first land application of the compost product of the year, the person land applying the compost product must notify the Regional director. The land application notification must include: name and address of the owner of the land, name and address of the person applying the compost product, the location of the land where the compost product will be applied, the type(s) of crops being grown, the person who prepared the NMP, the schedule of applications for the following 12-month period (from the first application) for each 10 hectares or less area of land.

A Qualified Professional is a person who

 is registered in British Columbia with a professional organization, is acting under that organization's code of ethics, and is subject to disciplinary action by that organization,

and

 through suitable education, experience, accreditation and knowledge may reasonably be relied upon to provide advice within his or her area of expertise. That area of expertise must be applicable to the duty or function to be performed.

Qualified Professionals may be found, for example, through the following professional associations:

the Association of Professional Biology [APB], <u>http://www.apbbc.bc.ca</u>

the BC Institute of Agrologists (BCIA), <u>http://bcia.com/index.php</u> and the Association of Professional Engineers and Geoscientists of BC (APEGBC), <u>http://www.apeg.bc.ca/members/dirsearch.html</u>.

For more information, consult our website at: <u>http://www.env.gov.bc.ca/epd/industrial/regs/codes</u> <u>/slaughter/index.htm</u>;

or send an e-mail the Environmental Standards Branch at <u>envprotdiv@victoria1.gov.bc.ca</u>.

Note: This summary is solely for the convenience of the reader. The current legislation and regulations should be consulted for complete information.