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10.0 DISPOSAL OF FARM WASTE

Farm waste must be managed with caution prior to disposal. Securely store waste in a closed, and possibly locked, area or container to ensure safety for family, livestock, pets and wildlife.

On-farm dumps, though generally not recommended, can be used exclusively for the disposal of small amounts of inert materials. The dump should be located on a naturally dry site, and be fenced to prevent entry by children and animals.

10.1 Disposal of Dead Animals

Some death loss will occur on cow/calf operations, no matter how well they are managed. Disposing of dead animals quickly and effectively is important to reduce the risk of disease. It is also important in maintaining good neighbour relations. Carcasses can be a source of disease if scavenged by wildlife or pets. Some of these diseases can then be passed back to livestock or even humans. Carcasses are also unsightly, a source of odour and a breeding site for flies.

Disposal of dead animals must occur within 48 hours of death unless the carcass is frozen.

Disposal of any animal suspected to have died from a reportable disease must be done in accordance with the *Health of Animals Act* (Canada).

The disposal options permitted in Alberta are:

- Transportation to a rendering plant for disposal.
- Burial in farm pit.
- Burning within regulations.
- Composting.
- Sending to a Class I or II landfill.
- Natural disposal (except for animals that have been euthanized with drugs and chemicals).

Refer to the *Destruction and Disposal of Dead Animals Regulation* under the *Livestock Diseases Act*, for details on regulations pertaining to the disposal of dead animals. A copy of this Regulation may be obtained from the Alberta Queen's Printer, www.qp.gov.ab.ca/custom_page, or through the AAFRD Web site at www.agric.gov.ab.ca/navigation/department/acts/index.html.

10.1.1 Managing dead animal disposal

Rendering

Dead animals must be picked up by rendering plants within 48 hours of death. The carcass must be stored until pickup.

- Use special storage bins or refrigeration until the carcass can be picked up.

When storing carcasses:

- Select a site for the storage area close to the farm entrance to minimize the need for collection vehicles to enter the property.
- Use an area that will minimize the spread of disease. For example, do not store the carcass near a waterway or water body or where it will be easily scavenged.

Natural disposal

Natural disposal refers to scavenging. Do not use this method when the animal is known or suspected to have died from an infectious disease that can be spread by scavengers or insects, or from a reportable disease. In these cases, dispose of mortalities in accordance with veterinary advice. Natural disposal is also not appropriate for animals that have been euthanized.

The Destruction and Disposal of Dead Animals Regulation contains the following guidelines for natural disposal:

- The total weight of the carcasses disposed at any one site must not exceed 1,000 kilograms.
- There must be at least 500 metres between disposal sites.
- The site must be:
 - 500 metres from wells, waterways and high water marks of lakes.
 - 25 metres from the edge of a coulee, major cut or embankment.
 - 400 metres from any livestock facility, including pastures that are not owned or leased by the owner of the animal.
 - 400 metres from a residence.
 - 400 metres from a road allowance.
 - 400 metres from a provincial park, recreation area, natural area, ecological reserve, wilderness area or forest recreation area.
- The site must not create a nuisance.

Burial

Bury mortalities promptly to control odour, insects and scavenging. Screen the burial area from view with trees, shrubs or fences, and locate it some distance from livestock.

The Destruction and Disposal of Dead Animals Regulation contains the following guidelines for burial:

- The total weight of carcasses in a burial pit must not exceed 2,500 kilograms.
- The pit must be:
 - 100 metres from wells, waterways and high water marks of lakes.
 - 25 metres from the edge of a coulee, major cut or embankment.
 - 100 metres from any livestock facility, including pastures that are not owned or leased by the owner of the animal.
 - 100 metres from a residence.
 - 300 metres from a primary highway.
 - 100 metres from a secondary highway.
 - 50 metres from any other road.
- The pit must be covered with:
 - A minimum of one metre of compacted soil.
 - A wooden or metal lid that is designed to exclude scavengers. Apply quicklime to the carcass in sufficient quantities to control flies and odour.
- The bottom of the pit must be at least one metre above the seasonal high water table.

Burning

Burning mortalities must be done in accordance with the *Destruction and Disposal of Dead Animal Regulation*. This typically requires a certified, commercial quality incinerator that produces a long term, high temperature burn, sufficient to completely dispose of the carcass. For more information, refer to the *Substance Release Regulation* and the *Code of Practice for Small Incinerators* from Alberta Environment.

Composting

Composting is a controlled, natural biological process of decomposition of organic materials in a predominately aerobic environment. Composting of livestock mortalities is possible and is practised in Alberta today. Six to nine months is required to properly compost a bovine carcass. The compost pile should be turned every three months to ensure proper decomposition. Any animal parts exposed as a result of the turning must be covered, as per the regulations below.

The Destruction and Disposal of Dead Animals Regulation contains the following requirements for composting mortalities:

- The site must be:
 - 100 metres from wells or other domestic water intakes, streams, creeks, ponds, springs and high water marks of lakes.
 - 25 metres from the edge of a coulee, major cut or embankment.
 - 100 metres from any residences.
 - 100 metres from any livestock facilities, including pastures, situated on land owned or leased by another person.
- The site must be designed in a manner that will exclude scavengers.
- Each animal part must not exceed 100 kilograms.
- The maximum volume of the animals or parts of them must not exceed 25 percent of the total compost pile.
- The animals or parts of them must be covered by at least 15 cm of composting material.

Research is currently underway to determine if animals or animal parts larger than 100 kilograms can be properly composted.



10.2 Disposal of Veterinary Waste

10.2.1 Sharps

Sharps are veterinary and laboratory materials capable of causing cuts or punctures and include needles, syringes, scalpel blades, slides, coverslips, pipettes, broken glass and empty or expired pharmaceutical containers. There is a risk of needle stick injuries or cuts when these materials are not handled or disposed of properly. Certain drugs or vaccines may cause reactions or infections if they are present on broken glass or used needles that break the skin. Blood on used needles, collection tubes or other equipment, may contain viruses or bacteria that can cause illness following a cut or needle stick injury. There are currently no regulations covering the disposal of sharps in agriculture.

To safely dispose of sharps:

- Separate sharps from other waste. Injuries can occur when handling sharps on the farm or at the landfill.
 - Use a labelled rigid container for disposal of sharps.
- Use a puncture-proof container with a sealed lid for needles and surgical blades. Special containers can be obtained from many local veterinary clinics. Containers must be labelled clearly as containing sharps and must not be used for recycling. A plastic jug with a narrow mouth or a pail with a narrow opening in the lid also work well. Do not use containers that allow easy access to contents. Ensure children or animals cannot remove the lid.
 - Use a pail or other rigid container for pharmaceutical bottles and syringes.
 - Use disposal facilities that accept veterinary waste. This may include a local vet clinic, hospital or waste disposal company. Contact a local vet clinic or hospital for information. Labelled sealed containers can also be taken to Class II landfills that accept medical waste.
 - Do not burn disposal containers.

10.2.2 Medicine disposal

Medicines may need to be disposed of for various reasons including expiry, spoilage, or simply because they are no longer needed. There are two classes of expired medicines – unused (unopened) and used (opened). Unused expired drugs can be returned to the point-of-purchase; many manufacturers will take them back for disposal. Used, expired drugs can be discarded in the same way as sharps. Modified live virus vaccines should be

rendered non-infectious before disposal to prevent the potential of the virus infecting workers or animals. This can be done by freezing, autoclaving, burning or adding bleach to the bottle. When disposing of used or unused expired medicines, do not attempt to empty or wash bottles – discard them with their contents. Consult a local veterinarian or pharmacist to learn more about medicine disposal.

10.3 Pesticides

Pesticides include herbicides, fungicides, insecticides, rodenticides, pesticide-treated

seed and topical parasiticides (pour-on or powders for treating parasites).

10.3.1 Pesticide disposal

Carefully dispose of unwanted or expired pesticides. Pesticides are hazardous wastes and cannot be disposed of in sanitary landfills or by burning. Offer unused pesticide supplies with proper use directions to neighbours. Pesticides that have no further use must be

disposed of as hazardous waste. Names of companies that are licensed to handle hazardous waste can be obtained from Alberta Environment's Recycle Information Line at 1-800-463-6326. Unused products can also be returned to the dealer.

10.3.2 Pesticide container disposal

Empty pesticide containers must be disposed of carefully. Unrinsed empty pesticide containers have the potential to contaminate ground and surface water, and can be toxic to fish and wildlife. Under the *Alberta Environmental Protection and Enhancement Act*, non-refillable plastic or metal pesticide containers (restricted, agricultural and industrial products) must be disposed of at a pesticide container collection site. A list of pesticide container disposal sites in Alberta and their hours is available from each municipality, in the *Crop Protection Manual* and from Alberta Environment.

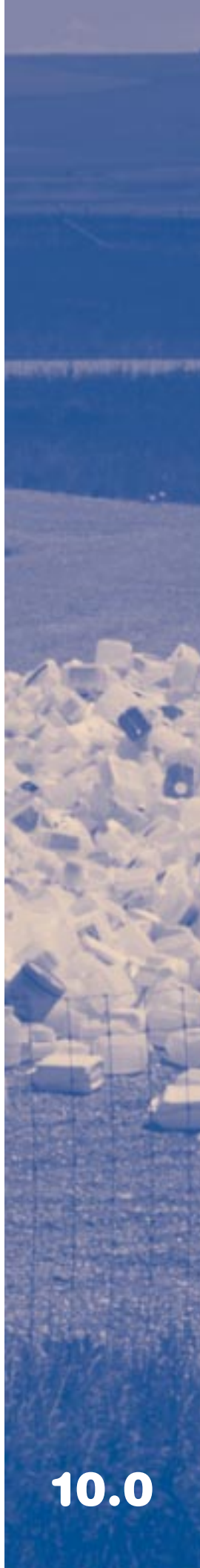
Containers must be triple rinsed or pressure rinsed and dry before disposal. In most cases, triple rinsing leaves plastic, metal or glass pesticide containers more than 99 percent free (less than 1 ppm) of residues. For details on rinsing, consult the *Crop Protection Manual*.

Recycle paper and cardboard outer wrappings at a recycling centre. Any cardboard that has been contaminated by a container rupture, accidental spill or improper handling procedure should be disposed of as a hazardous waste. Evidence of cardboard contamination

should be obvious – signs of exposure to liquid, powder or granules, or a strong chemical odour. Dispose of these materials at a sanitary landfill. Do not burn paper bags or cardboard containers. Some pesticide container sites have bins or separate areas for collecting these outer packaging materials.

Containers from topical parasiticides (e.g. pour-on compounds or powders for lice and mange) should be disposed of in a safe manner. These compounds can be toxic to fish, wildlife, other livestock and humans. These products should be kept out of waterways and streams and not be allowed to contaminate foods or feeds. Some products are controlled under the *Pest Control Products Act* and it is an offence to use them other than as directed on the label.

Containers should not be reused and empty containers should be made unsuitable for re-use. For specific information on the disposal of unused and unwanted product and the cleanup of spills, contact the regional office of Conservation and Protection, Environment Canada.



10.4 For More Information

Contact the following offices for the publications listed or for more information.

Alberta Agriculture, Food and Rural Development (AAFRD)

Agriculture Information Centre 1-866-882-7677

Publications 1-800-292-5697

www.agric.gov.ab.ca

- *Livestock Mortality Management (Disposal)*
Agdex 400/29-1.
- *Livestock Mortality Burial Techniques*
Agdex 400/29-2.
- *Crop Protection Manual* Agdex 606-1.

Alberta Environment

Action-on-Waste Recycle Information

1-800-463-6326