



The Livestock Waste Control Scheme : Guidelines for Dry Muck-out of Livestock Waste

INTRODUCTION

Following the implementation of the Livestock Waste Control Scheme in 1988 and the revised Livestock Waste Control Scheme in 1994, livestock farmers in Livestock Waste Control and Restriction Areas are required to comply with control requirements in the management and disposal of livestock waste. One of the recommended livestock waste management measures is the Dry Muck-Out Method (DMO) which minimizes the amount of wastewater requiring treatment. This involves the dry removal of solid livestock waste from livestock keeping structures for subsequent disposal, the cleaning or hosing down of the residual waste with a small volume of water, and the treatment and disposal of the wastewater generated. These guidelines are prepared with a view to providing livestock farmers and system designers with general information on the dry muck-out operation for the abatement of pollution caused by livestock waste.

It should be noted that all livestock waste removed from livestock structures must be properly stored and handled at all times. The small quantity of wastewater generated from livestock keeping structures may be disposed of by a soakaway system, and it is an offence under the Waste Disposal Ordinance (WDO) to allow sub-standard wastewater (treated or untreated) or waste matters enter environmental waters. An offence under the WDO may constitute a violation of other legislation (including the Water Pollution Control Ordinance, the Public Health and Municipal Services Ordinance and the Waterworks Ordinance, etc).

The dry muck-out operation is suitable for poultry farms and pig farms, especially small ones, in which labour is available for the dry muck-out of livestock waste and the location of the farm is suitable for the installation of a soakaway system.

THE DRY MUCK-OUT OPERATION

The dry muck-out operation comprises the removal of the bulk of the livestock waste (mostly manure) from the livestock keeping structures by means of a shovel or a scraper and placing it in a properly constructed container. This waste should either be composted on farm or be collected for reuse, treatment or disposal in accordance with the Code of Practice for Livestock Waste Management. During such operation, the farm operator should make suitable arrangement and take all necessary precautions to avoid any spillage or pollution.

All storage containers for livestock waste should be leak-proof, properly designed to prevent ingress of rainwater, and constructed of robust and corrosion resistant material. Each container should have a cover to minimize odour emission and prevent intrusion of insects and rodents, and also have handles such that it can be readily moved or manipulated or lifted by a normal adult during normal use.

Following the dry muck-out of livestock waste, the residues may be washed or hosed out to a soakaway system. The amount of water used and the percentage of solids removed should agree with the size of the soakaway system. Guidelines on soakaway system for livestock waste treatment are given in the “Guidelines for Soakaway System”.

GENERAL PRECAUTIONS

For a dry muck-out operation to be effective, the following general principles should be adhered to:

- (a) Dry removal of livestock waste as much as is possible to minimize the quantity of residual livestock waste to be washed or hosed out. This is very important, otherwise highly polluted wastewater may result from washing or hosing out, and this will shorten the service life of a soakaway system.
- (b) Minimizing the amount of water used in washing or hosing out the residual livestock waste.
- (c) Provision of a sufficient number of storage containers.

OTHER INFORMATION

There are altogether five sets of similar guidelines in Chinese and English available free of charge from the Environmental Protection Department:

- (a) Guidelines for Dry Muck Out of Livestock Waste;
- (b) Guidelines for Wet Muck Out and Hybrid Systems;
- (c) Guidelines for Soakaway System;
- (d) Guidelines for the Management of Livestock Waste Arising from Free-range Poultry Keeping; and
- (e) Guidelines for Litter Bedding Method for the Treatment of Livestock Waste.