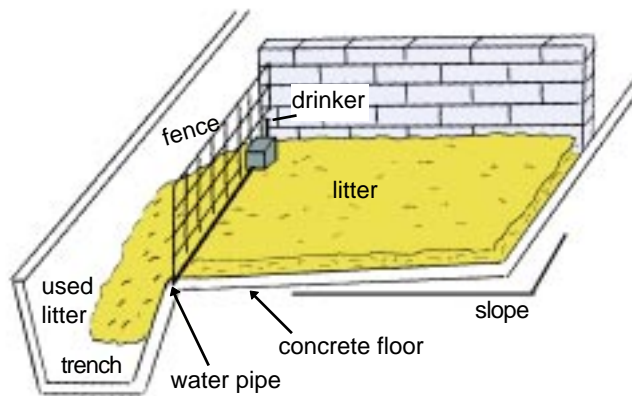


Dry Litter Waste Management System

The dry litter system can help manage and utilize wastes while promoting a healthy and clean environment. The dry litter system allows farmers to manage swine wastes without using a lot of water. Enclosed pens on sloped concrete floors are covered in a deep layer of litter material such as wood chips or husks from coconut, corn, or macadamia nut. The sloping floors and the hoof action of the swine allows the litter material and the swine wastes to mix together and, with gravity, flow out the lower end of the pen into a holding trench. New litter is added at the higher end of the sloping pen to replace the old litter that falls into the trench.



Pigs on litter



Parts of a dry litter system

Source: Hawaii State Department of Health, Wastewater Branch. *Guidelines for Livestock Waste Management*. 1996.

The combined litter material and swine wastes produce an organic compost material that can be used for crops. The material in the trench can be composted there or removed to a compost area.

Benefits of a dry litter system

Benefits of a dry litter system include the following:

- Wastes and litter materials are automatically mixed to produce a “no odor” compost.
- Daily washings of pens are not needed.
- The amount of raw wastes to be collected, handled, and treated or stored is reduced.
- Daily labor to clean pens is reduced.
- Pest or fly problems in pens are reduced.
- Pigs live in a clean pen and grow well.
- The heat produced by composting can kill disease organisms and parasites if the temperature remains above 130° F/54° C for at least 3 days.

Dry litter system considerations

Issues to consider when designing a dry litter system include the following:

- Pens should be sloped so material will gradually move to the lower end of the pen. Slope will vary according to the litter material used. Recommended slopes range between 1 in 15 and 1 in 20.
- Drinking water should be located at the lower end of the pen to reduce excessive moisture in the litter.
- Bedding material that packs down, such as paper and grass, should be avoided. Use materials such as chipped tree trimmings, macadamia nut or coconut husks, and other recycled yard and bulky green wastes.
- A consistent and adequate supply of litter is required to operate the system properly.
- Some plant materials are poisonous, so care must be taken with yard and green wastes.
- The heat produced by composting can make pigs uncomfortable if the materials stay in the pen too long.

For additional resources and publications, refer to ADAP fact sheet 2003-11 on *Additional Information for Swine Waste Management*.

This series of fact sheets was developed by: Halina M. Zaleski* (University of Hawaii-UHM), Manuel Duguies (University of Guam), Engly Ioanis (College of Micronesia-FSM), Gordon Cleveland (formerly with UHM), Daniel Paquin (UHM), Bradley LeaMaster (formerly with UHM), Luisa Castro** (UHM), and James Hollyer (UHM).

* Send correspondence to 1955 East-West Road, Agricultural Science 216, College of Tropical Agriculture and Human Resources, University of Hawaii at Manoa, Honolulu, Hawaii USA 96822.

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Disclaimer: The information contained on this publication is to be used at your own risk. As always, follow your local regulations.

For Further Information:

American Samoa Community College (684) 699-1575 - fax (684) 699-5011
 College of Micronesia (691) 320-2728 - fax (691) 320-2726
 College of Micronesia (FSM) (691) 320-8181 - fax (691) 320-2972
 College of the Marshall Islands (692) 528-5033 - fax (692) 528-4699
 Palau Community College (680) 488-2746 - fax (680) 488-3307
 Northern Marianas College (670) 234-3690 - fax (670) 234-0054
 University of Guam (671) 735-2002 - fax (671) 734-6842
 University of Hawaii (808) 956-8140 - fax (808) 956-6967

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 ADAP Home Office - College of Tropical Agriculture and Human Resources
 3050 Maile Way, Gilmore Hall 112, University of Hawaii at Manoa
 Honolulu, HI 96822 USA www.adap.hawaii.edu/adap - adap@hawaii.edu
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