

The Sweet Smell of Success: The Odorless Piggery

Michael DuPonte



Livestock production has been an integral part of Hawai'i's history since the first Polynesian settlers arrived over 15 centuries ago. During the past twenty years, livestock production has become highly specialized and intensive, creating nutrient waste, odor and nuisance pest management issues. Today, swine production perpetuates culture and economic sustainability. A number of interagency research and demonstration projects have been implemented throughout the United States to develop best management practices (BMPs) to address water quality degradation due to agricultural, especially livestock, activities. Until recently, lagoon storage, effluent irrigation, composting, and solid separation have been

adequate for on-farm nutrient management to comply with the Federal Clean Water Act. Due to more stringent US EPA regulations, which include odor and vector nuisance components, most of these BMPs will need to be altered significantly.

Mike DuPonte, UH CTAHR Livestock Extension Agent, learned of natural farming techniques used in South Korea, specifically for swine production, which could be adapted as potential BMPs in the United States. The concept of incorporating indigenous micro organisms (IMO), use of natural ventilation and solar positioning for cooling and drying within livestock housing, and a maintenance-free green waste bedding system all combine to create a piggery that mitigates generation of nuisance flies and odors and all but eliminates the need for manure handling.

Through a UH CTAHR project in collaboration with Cho Global Natural Farming (South Korea), Kang Farms (Kurtistown, HI), County of Hawai'i Research and Development, Hawai'i Department of Health-Clean Water Branch, Puna Soil and Water Conservation District, and USDA Natural Resource Conservation Service, a piggery implementing these techniques was recently constructed just outside of Hilo, Hawai'i, the first of its kind in the United States. With a few modifications to address tropical conditions, UH CTAHR has assisted this piggery in meeting County of Hawaii building



code requirements, state health codes, and US EPA regulations pertaining to waste management issues, including nuisance vectors and odors, on small scale swine farms.

The only odor on this hog farm is the sweet smell of success!

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Virtual Field Day: Piggery Open House
(Aug 13, 2009)

[http://www.ctahr.hawaii.edu/hnfas/
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