

Experience with the Composting of Poultry Carcasses

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Disposal of dead birds is a daily chore for the poultry producer and is an extremely important environmental issue. Composting is a tested and proven alternative for dead bird disposal and provides an economical and biologically safe means of converting daily mortality into an odorless, humus-like material useful as a soil amendment. The process involves layering prescribed amounts of dead birds, poultry litter, and water at a ratio (w:w) of 1:2:0.25 parts, respectively, into a bin or alley. Poultry litter comprised of bedding (usually pine shavings, sawdust, peanut hulls, or rice hulls) and manure is the primary compost medium. Under certain situations a carbon source such as straw (0.10 part by weight) can be layered under the birds and may prove beneficial. After 14 to 21 days, the pile reaches 130 to 150 F, which pasteurizes the compost. Once temperature peaks, the material is moved to a second-stage bin for aeration and re-heating. For composting to work properly, temperatures in excess of 130 F must be achieved and maintained for 14 to 21 days during two composting cycles. The final step is to store compost until land application is feasible.

Composters are intended to deal with normal on-farm mortality and for composting to be a viable method for poultry carcass disposal it is paramount that the process completely inactivates pathogenic (avian and human) microorganisms prior to land application. Tests indicate that certain bacterial and viral pathogens do not survive the pasteurizing effects of two-stage composting. Sloppy loading (piling carcasses against sidewalls), careless layering of materials, and taking shortcuts such as skipping the second stage of composting will defeat the effectiveness and safety of the method and should be avoided. When properly managed composting poultry carcasses is a desirable environmental and economic alternative that has been approved in many states. Approximately 55% of the 3,800 broiler producers in Alabama have adopted composting for disposal of their dead.