

Installation and Use of Incinerators

Every day the poultry grower is faced with the responsibility of disposing of dead birds. Mortality losses due to congenital defects, disease, or accident occur daily. In a flock of 100,000 broilers grown to 49 days of age, approximately 5,000 will be lost. That is an average loss of 0.1% each day.

Dumping carcasses into ditches, streams, and fields is not only unacceptable but also illegal. Proper disposal methods will reduce nuisance complaints from neighbors as well as safeguard the environment and reduce chances of disease transmission.

Methods suitable for the proper disposal of poultry farm mortalities are burial, incineration, composting, and rendering. Incineration is often the chosen alternative in areas where drainage is so poor that pits are not acceptable or where rocky soil makes digging expensive. Recognized as one of the most biologically safe methods of disposal, incineration curtails the spread of disease and does not create water pollution problems. The comparatively small amount of waste by-products (ash) does not attract insects or scavengers and can be disposed of easily. The main environmental concern is the emission of particulates that may be generated during the burning process.

Types Of Incinerators

Proper and acceptable cremation of dead birds is not obtained by merely drenching the carcasses with a flammable fluid and then igniting the stack. Not only is such an approach usually incomplete, but the resulting odors may prompt nuisance complaints. Homemade incinerators,

usually constructed from 55-gallon barrels or other drums, are unsatisfactory because they do not meet current air pollution controls.

Commercial incinerators are the best equipment to ensure proper burn and to avoid creating pollution. The Alabama Department of Environmental Management requires the use of Class 4 incinerators for disposing of poultry mortalities. Units are available with oil or gas burners. Smoke discharge stacks may be fitted with afterburning devices which make use of high heat levels for near complete gas combustion.

When purchasing an incinerator consider the following points:

Sturdiness: The unit should be able to operate under heavy loading conditions and withstand high operating temperatures.

Automatic Controls: A unit that can be loaded, ignited, and allowed to run on a timer is a real convenience.

Capacity: The poultry grower must estimate the expected daily mortality rate and consider bird size when calculating the incinerator capacity needed. The incinerator should be able to accommodate normal daily mortality. When heavy, unexpected losses occur, alternative methods of disposal should be considered. Selecting an appropriately sized unit will avoid overloading and ensure proper operation for a longer period of time. Manufacturers of commercial incinerators typically establish a burn rate for their units. This information can help in deciding the size unit to purchase.

Location Of Unit

Placing the incinerator unit in an appropriate location will promote convenient use and avoid potential problems. The unit should be down wind from poultry houses, farm residences, and neighbors. Exposure to the destructive elements of nature can greatly reduce the life of the unit. It is wise to place the incinerator on a concrete slab under a shelter to extend the life of the unit. Because of the intense heat that is generated, clearance between the discharge stack and any wooden structure or trees must be maintained. To promote daily use, location of incinerators should be convenient to the poultry houses as possible.

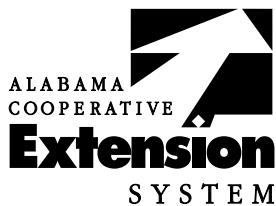
Cost Of Operation

Some considerations in cost of operating incinerators include the rate of burn and price of fuel. Recent data obtained from broiler operators in Alabama indicated an average burn rate of about 65 pounds per hour. Incineration costs can vary depending on weight, moisture, and fat content of carcasses and the loading capacity of the unit. As the bird's age and carcass size increase, several loads may be required in order to cremate a day's mortality. In addition to the initial purchase cost of an incinerator, growers can expect to spend approximately \$3.50 to cremate 100 pounds of carcasses, assuming fuel costs are \$0.61 per gallon. As fuel prices increase, so will the cost of incineration.

Certain maintenance costs are involved with incinerators. Expendable parts and grates need to be replaced every 2 or 3 years. The entire unit may require complete refurbishment or replacement every 5 to 7 years.

Conclusion

Incineration of poultry farm mortalities is an acceptable method of disposal. However, a greater number of nuisance complaints are generated by this method than by any other means of disposal. It is imperative that the grower follow recommended procedures for locating and operating the unit. The poultry grower is also encouraged to calculate carefully the cost of operation prior to purchase of an incinerator.



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