

Title: Composting Every Day Mortality and Other Wastes from Layer Farms

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Byline:

Composting is a viable alternative method for disposing of daily mortalities, spent hens, egg and other waste produced on Australian egg farms. Under controlled systems, with the correct management, good results can be achieved and a safe, nutrient-rich soil amendment produced for reuse on-farm or sale to other farmers. This project involved on-farm compost trials at nine farms across Australia.

Summary:

Composting is a viable alternative method for disposing of daily mortalities, spent hens, egg waste and other waste produced on egg farms. Under controlled systems, with the correct management, good results can be achieved and a safe, nutrient-rich soil amendment produced for reuse on-farm or sale to other farmers. This project involved on-farm compost trials at nine farms across Australia. All farmers attended an initial training workshop where the principles of composting were presented and the project was completed with a second workshop where farmers were able to report their results and share experience with composting.

Trials were monitored with temperature logging equipment and the compost was sampled for analysis of pathogen and nutrient levels. Successful composting, as defined for this project, was: i) To produce a microbiologically safe material for reuse in 'low risk' agricultural systems (such as broad acre cropping and grazed pastures), ii) to improve the environmental outcomes for layer farms compared with other waste management options, iii) to assess the value of the compost as a nutrient source, and iv) to find a process that is relatively low in management input and cost.

Very few of the samples analysed could be considered safe for reuse in a grazing context because of the risk of botulism. In general there were insufficient temperature records to ensure pasteurisation however, and in some samples bones and undecomposed flesh were observed. This being said, many of the trials may have shown significantly better results 1-2 months after the sampling was carried out, provided ideal composting conditions were maintained. In most case study trials, the material produced would be considered 'partially composted' as it does not meet the Australian composting standards.

Provided the correct guidelines are followed for establishing compost sites and managing the composting process, the environmental outcomes from composting are believed to be superior to burial in most cases.

Nutrient analysis results show that compost is a valuable by-product that can be valuable for re-use on agricultural crops and pastures, provided pathogen levels are controlled. Observation of compost samples suggested that most would benefit from screening prior to spreading to remove large particles of compost materials and undecomposed bones.

Composting mortalities and other poultry farm wastes can be done for low cost and with a small amount of management input. However, procedures need to be strictly followed and the correct materials need to be used to ensure a safe product is produced.