

Meat Chicken Technical Environmental Note 1

Litter Clean-out

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Introduction

Shed clean-out enables day old chicks to be introduced to clean bedding in the brooding section of the shed. This minimises the risk of disease. There are three common practices adopted in Australia for litter clean-out:

- Single use litter
- Partial reuse
- Multi-use litter



REMOVING USED LITTER FROM A SINGLE USE LITTER SHED WITH A CLAY BASE

Single Use Litter

Single use litter involves the total clean-out of a shed after each batch of chickens and total replacement of bedding material. This practice has been widely adopted in Australia for many years, along with partial reuse. However, there is now a move to either more partial reuse or multi-use litter to reduce costs of production.

Partial Reuse

Partial reuse generally involves the removal of litter from the brooding section for spreading on the grower section of the shed. New bedding material is then spread on the brooding section. Sometimes the spent litter is heaped for a few days to elevate its temperature to kill pathogens (pasteurisation). The effectiveness of this has not been evaluated, although it is likely to work if all of the material in the pile is exposed to a high enough temperature (e.g. by turning), for an adequate period.

Some of the spent litter may be removed after each batch, and after 2 – 5 batches the shed is totally cleaned out. If the farm has a breakdown in biosecurity, or there is a disease incidence, the shed is completely cleaned out at the end of the batch.

Multi-use Litter

With full multi-use of litter, only caked material is removed and the shed disinfected. The litter in the brooding section is either left as-is or covered with 25-50 mm of new bedding material.

During the clean out of multi-batch litter there is the potential for more odour to be produced than during the clean-out of single batch litter because the litter contains more organic matter undergoing anaerobic decomposition at the time of clean out. However, the number of clean-out events will be less.

Multi-batch litter may produce a spent litter with a higher concentration of nutrients and heavy metals. This concentration of heavy metals may present problems for the sale and/or application of the spent litter. Litter beetles may present a greater problem in multi-use litter. Extra disinfection may be required between batches to control this potential problem.

Summary

There is no conclusive evidence to suggest that one system is better than the other for bird health, production or environmental management. The issues to consider when deciding which system is the best are:

- Availability of clean bedding material
- Availability of nearby spent litter application areas
- Potential for increased odour generation
- Shed environment
- Concentration of nutrients and heavy metals in the spent litter
- Risk of disease transfer between batches
- Litter beetles may cause an increased problem with multi-use litter.
- Chemical usage for disinfection

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