

TIMELY INFORMATION

Agriculture & Natural Resources

In-House Windrow Composting – How, When and Why

Composting litter between flocks has become an accepted method for reducing microbial loads in broiler houses during times of the year when removing and replacing litter is inconvenient or infeasible. Monitoring of compost of this type tells us that many bacterial and viral pathogens are eliminated or greatly reduced. During the last few years, broiler producers have refined methods of in-house litter composting with the intent of using this technique to reduce bacterial and viral loads between growouts or prior to removal of litter from the house. Here are some ideas on how to use in-house windrow composting to **improve bird health** and **minimize the spread of disease** during litter movement.

1. No need to cake out prior to composting (in most cases) as moisture is needed for the composting process.
2. Create one or more windrows the length of the house with a box blade or composting machine (3-6 feet high).
3. Allow compost to heat for 4-7 days (with normal litter moisture levels, composting temperatures (130 – 150 F) will be reached within 12 hrs).
4. Spread out litter and allow ammonia to blow off. Remove ammonia using minimum ventilation.
5. Allow litter to cool down and ammonia to blow off prior to adding litter treatments and setting up to brood the next batch of chicks.
6. If you are planning to clean out, it may be easiest to remove the litter directly from the compost piles.

When to windrow compost – Every third flock with built-up litter, prior to litter removal from the house, if a minor disease challenge is reducing performance.

When not to windrow compost – If a major disease challenge is encountered (total cleanout is preferred), if downtimes are less than 9 days, if your litter material doesn't lend itself to composting (such as sand).

Some growers have opted to windrow compost between each flock. Although this technique is effective in maintaining low numbers of disease organisms, the return to the grower for this increased work load may not return the optimum benefit. If a grower is cleaning out once a year, windrow composting after three flocks will reduce disease challenge and allow the grower improved performance until the next cleanout. Many integrators suggest a second windrowing just prior to cleanout to reduce the spread of disease. This is particularly important where laryngotracheitis (LT) has been a problem. If a minor disease challenge is an issue, heating the house to 100F for a day or more during windrow composting will help insure a better reduction in disease organism numbers. This will be easiest to do in the summer, when high ambient temperatures help with the process. This may be cost prohibitive during the cooler months.

If litter sources are scarce and litter is kept for more than one year, two rounds of windrow composting a year will help avoid reductions in broiler performance due to disease buildup. If managed correctly, windrow composting may be combined with other litter management techniques such as using litter amendments to improve house environment and broiler performance.

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