

Common Manure Composting Problems and Their Solutions

This chart is to be used as a supplement to NDSU Extension publication NM1478 (Keena, 2022).



Symptom	Cause	Solution
Rotten egg smell	Not enough oxygen due to compaction	Turn and mix pile to create air pockets. If particle size is too small (<1/8 inch), add bulkier particles such as woodchips about 2 inches in size.
	Excessive moisture (water drips from squeeze test)	Turn and mix pile to aid drying. If particle size is too small (<1/8 inch), add bulkier particles such as woodchips about 2 inches in size.
Ammonia smell	Excess nitrogen	Add more carbon sources (straw, leaves, etc.).
Pile does not heat up	Pile is too small.	Increase pile size to at least 5 ft high x 5 ft wide x 5 ft deep.
	Pile is too dry. - most common problem (manure/compost crumbles with squeeze test)	While turning and mixing pile, add water with a hose or bucket. Let pile rest for several hours, then retest with the squeeze test. Add more water if necessary.
	Not enough nitrogen	Add nitrogen sources (grass clippings, hay, etc.).
	Not enough oxygen	Turn and mix pile to introduce oxygen. If particles are too small, add bulkier items such as woodchips.
	Cold/winter weather	Make sure the pile is large enough (at least 5 ft x 5 ft x 5 ft). Turn and mix pile less frequently than in warm weather.
	Composting is complete.	Compost is complete when it resembles soil and is crumbly.
Attracts insects, millipedes, slugs, etc.	This is normal.	To minimize insect problems, keep at the proper moisture level (40-65%). Make sure the pile is heating to high enough temperatures to kill insect eggs (>104°F) (Nielsen et al., 2007).

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References:

Keena, M. A. 2022. Composting Animal Manures: A guide to the process and management of animal manure compost. North Dakota State University Cooperative Extension publication NM1478.

Nielsen, M.K., Kaplan, R.M., Thamsborg, S.M., Monrad, J., Olsen, S.N., 2007. Climatic influences on development and survival of free-living stages of equine strongyles: Implications for worm control strategies and managing anthelmintic resistance. *Vet. J.* 174, 23-32.