

Condition	Possible source or reason	Other clues	Remedy
Pile fails to heat	Materials too dry	Cannot squeeze water from material	Add water or wet ingredients
	Materials too wet	Materials look or feel soggy; pile slumps; moisture content greater than 60%	Add dry amendments and remix
	Not enough nitrogen, or slowly degrading or stable materials	C:N ratio greater than 50:1; large amount of woody materials	Add high-nitrogen ingredients; change composting recipe
	Poor structure	Pile settles quickly; few large particles; not excessively wet	Add bulking agent
	Cold weather and small pile size	Pile height less than 3.5 ft	Enlarge or combine piles; add highly degradable ingredients
Temperature falls consistently over several days	pH excessively low	pH measures less than 5.5; garbage-like odor	Add lime or wood ash and remix
	Low oxygen; need for aeration	Temperature declines gradually rather than sharply	Turn or aerate pile
Temperature falls consistently over several days	Low moisture	Cannot squeeze water from material	Add water
	Poorly mixed materials	Visible differences in the pile moisture and materials	Turn or remix
Uneven temperatures or varying odors in pile	Uneven airflow or air short circuiting	Visible differences in the pile moisture and materials	Shorten aeration pipe; remix pile
	Materials at different stages of maturity	Temperature varies along the pile length	None required
Gradually falling temperatures; pile does not reheat after turning or aeration	Composting nearing completion	Approaching expected composting time period; adequate moisture available; C:N ratio less than 20:1	None required
	Low moisture	Cannot squeeze water from materials	Add water and remix
Pile overheating (temperature greater than 150°F)	Insufficient aeration for heat removal	Pile is moist	Turn pile or increase the airflow rate
	Moderate to low moisture; limited evaporative cooling	Pile feels damp but not excessively wet or dry	Add water; continue turning and aeration to control temperature
	Pile is too large	Height greater than 8 ft.	Decrease the pile size
Extremely high temperatures (greater than 170°F) in pile; composting or curing / storage	Pyrolysis or spontaneous combustion	Low moisture content; pile interior looks or smells charred	Decrease pile size; maintain proper moisture content; add water to charred or smoldering sections; break down pile, combine with other piles
High temperatures or odors in curing or storage pile	Compost is not stable	Short active composting period; temperature and odor change after mixing	Manage pile for temperature and odor control, turn piles as necessary; limit pile size
	Piles are too large	Height greater than 8 feet; width greater than 20 feet	Decrease pile size
Ammonia odor coming from composting piles	High nitrogen level	C:N ratio less than 20:1	Add high-carbon amendments

	High pH  Slowly available carbon source	pH greater than 8.0  Large woody particles; C:N ratio less than 30:1	Lower pH with acidic ingredients and/or avoid alkaline ingredients  Use another carbon amendment or increase the carbon proportion
Rotten-egg or putrid odors coming from composting piles continually	Anaerobic conditions Materials too wet Poor structure Pile compacted  Insufficient aeration  Anaerobic conditions Pile too large  Airflow uneven or short circuiting	Low temperatures      High temperatures	Add dry amendment  Add bulking agent  Remix pile and add bulking agent if necessary  Turn pile or increase the airflow rate   Decrease pile size  Remix pile; change recipe
Odors generated only after turning	Odorous raw materials  Insufficient aeration; anaerobic interior	High temperatures  Falling temperatures	Frequent turnings; increase porosity; add odor-absorbing amendment  Shorten time interval between turnings; increase porosity
Site-related odors (piles not odorous)	Raw materials  Nutrient-rich puddles because of poor drainage  Holding pond or lagoon overloaded with nutrients or sediment	Odor is characteristic of the raw material  Standing puddles of water; ruts in pad  Heavy algae and weed growth; gas bubbles on pond surface	Handle raw materials promptly with minimal storage  Divert runoff away; maintain pad surface  Install sediment trap; enlarge pond surface area; use runoff and pond water on cropland
Fly or mosquito problems	Flies breeding in compost piles  Flies breeding in raw materials  Mosquitoes breeding in stagnant water	Fresh manure or food material at pile surface; flies hover around piles  Wet raw materials stored on site more than 4 days  Standing puddles of water; nutrient-rich pond or lagoon	Turn piles every 4-7 days; cover static piles with a 6-inch layer of compost.  Handle raw materials promptly  Grade site properly; maintain pad surface; maintain holding pond or lagoon in aerobic condition
Compost contains clumps of materials and large particles; texture is not uniform	Poor mixing of materials or insufficient turning  Airflow uneven or short-circuiting  Raw materials contain large particles and non-degradable materials  Active composting not complete	Original raw materials discernible in compost  Wet clumps of compost  Large, often woody, particles in compost  Curing piles heat or develop odors	Screen compost; improve initial mixing  Screen or shred compost; improve air distribution  Screen compost; grind and/or sort raw materials  Lengthen composting time or improve composting conditions