Appendix C: Troubleshooting Table

Adapted with permission from the NRAES *On-Farm Composting Handbook*.

Composting System Condition	Possible Source or Reason	Other Clues	Recommended Remedy
Composting system fails to heat	Materials too dry	Cannot squeeze water from material	Add water or wet ingredients
	Materials too wet	Materials look or feel soggy; compost pile slumps; moisture content >60%	Add dry ingredients (leaves, straw, wood chips) and remix
	Not enough nitrogen, materials are slowly decomposing	Large amount of woody materials	Add high nitrogen ingredients; alter composting recipe
	Poor structure	Composting system pile settles quickly; few large particles; not excessively wet	Add wood chips, straw, build in dome shape
	Cold weather and small composting system pile size	Composting system pile size is less than 3.5 to 4 ft.	Enlarge or combine composting system piles; add highly degradable ingredients (fruit and veggie)
Temperature falls consistently over several days	Low oxygen; need for aeration	Temperature declines gradually rather than sharply	Turn or aerate composting system pile
	Low moisture	Cannot squeeze water from material	Add water
Uneven temperatures or varying odors in composting system pile	Poorly mixed materials	Visible differences in the composting system pile moisture and materials	Turn/remix composting system pile
	Uneven airflow	Poorly mixed materials	Remix composting system pile and build in dome shape
	Materials at different stages of maturity	Poorly mixed materials	None required
Gradually falling temperatures; composting system pile does not reheat after turning or aeration	Composting nearing completion	Approaching expected composting time period; adequate moisture available	None required
	Low moisture	Cannot squeeze water from materials	Add water and remix
Composting system pile overheating (temperature >150°F)	Insufficient aeration for heat removal	Composting system pile is moist	Turn composting system pile
	Moderate to low moisture; limited evaporative cooling	Composting pile feels damp but not excessively wet or dry	Add water; continue turning and aeration to control temperature

Extremely high temperatures (>170°F) in composting system pile, curing pile, or storage materials	Pyrolysis or spontaneous combustion	Low moisture content; composting system pile interior looks or smells charred	Maintain proper moisture content; add water to charred or smoldering sections; breakdown pile and properly rebuild
High temperatures or odors in curing or finished compost storage pile	Compost is not stable	Short active composting period	Compost is not in curing stage, keep turning compost and tracking temperature and moisture
Ammonia odor coming from composting system pile	High nitrogen level	C:N ratio < 20:1	Add high-carbon materials
	Slowly available carbon source	Large woody particles; C:N ratio <30:1	Use another carbon material such as leaves or increase the carbon proportion
Rotten-egg or putrid odors coming from composting system pile	Anaerobic conditions	Low temperatures	Turn composting system pile
	Anaerobic conditions - materials too wet	Low temperatures	Add dry materials
	Anaerobic conditions - poor structure	Low temperatures	Add wood chips, straw, and rebuild in dome shape
	Anaerobic conditions - composting system pile is compacted	Low temperatures	Remix and rebuild in dome shape
	Anaerobic conditions - insufficient aeration	Low temperatures	Turn composting system pile to increase airflow rate
	Anaerobic conditions - pile too large	High temperatures	Break down composting system pile, remix with accurate recipe, and rebuild smaller pile
	Anaerobic conditions - airflow uneven	High temperatures	Break down composting system pile, remix with accurate recipe, and rebuild proper structure and size
Odors generated only after turning	Odorous raw materials	High temperatures	Frequent turnings; add carbon to absorb and mitigate odors
	Insufficient aeration; anaerobic interior	Falling temperatures	Shorten time interval between turnings; add high-carbon materials, especially wood chips
Site-related odors (composting system pile not odorous)	Raw materials	Odor is characteristic of the raw material	Handle raw materials promptly with minimal storage
	Nutrient-rich puddles because of poor drainage	Standing puddles of water; ruts in ground surface or hardscape pad	Divert runoff properly; maintain pad surface

Fly or mosquito problems *(Note: black soldier flies are usually not a problem)*	Flies breeding in compost system pile	Fresh nitrogen materials exposed; flies hovering around composting system pile	Turn composting system pile every 2 to 3 days; cover with 6- to 12-inch layer of compost or carbon source
	Flies breeding in raw materials	Wet raw materials stored onsite longer than several days	Handle raw materials promptly; properly mix into composting system pile
	Mosquitoes breeding in stagnant water	Standing puddles of water; nutrient-rich receiving waters	Water effectively by showering compost pile while mixing; keep standing pools of water away from composting system pile
Finished compost contains clumps of materials and large particles; texture is not uniform	Poor mixing of materials or insufficient turning	Original raw materials discernable in compost	Screen/sift compost; improve initial mixing
	Airflow uneven	Wet clumps of compost	Screen/sift or shred/break compost into smaller bits; improve air distribution
	Raw materials contain large particles and non-degradable or slowly degradable materials	Large, often woody, particles in compost	Screen/sift compost; shred/break compost into smaller bits
	Active composting not complete	Curing pile heats or develops odors	Lengthen composting time or improve composting conditions