

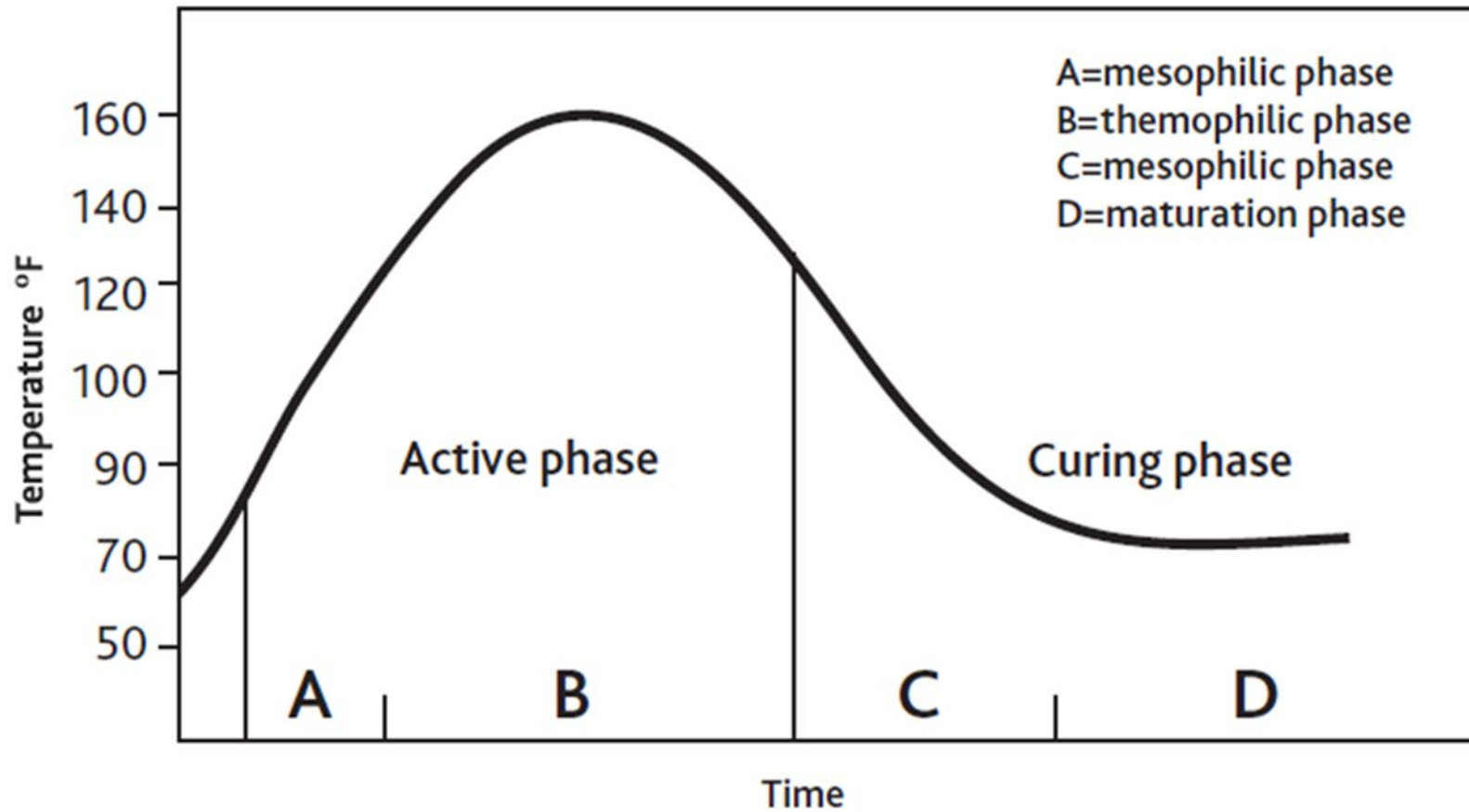
Module 06.05: Composting Parameters - Temperature



LSU AgCenter Home Composting Certificate Course

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Remember this graph about temperatures during the four phases of composting?



Temperature is an extremely important diagnostic parameter

One tool that everyone who composts should have:



Compost Thermometer

24", 36" or 48" stem length

Qualities of a Good Compost Thermometer

- Appropriate length to reach the center of your compost pile
- Clear, easy to read display
- Made of stainless steel or other non-rusting material
- Temperature range from 0-200 degrees Fahrenheit
- Display is hermetically sealed, preventing fogging
- Includes a warranty (not required but a real plus)

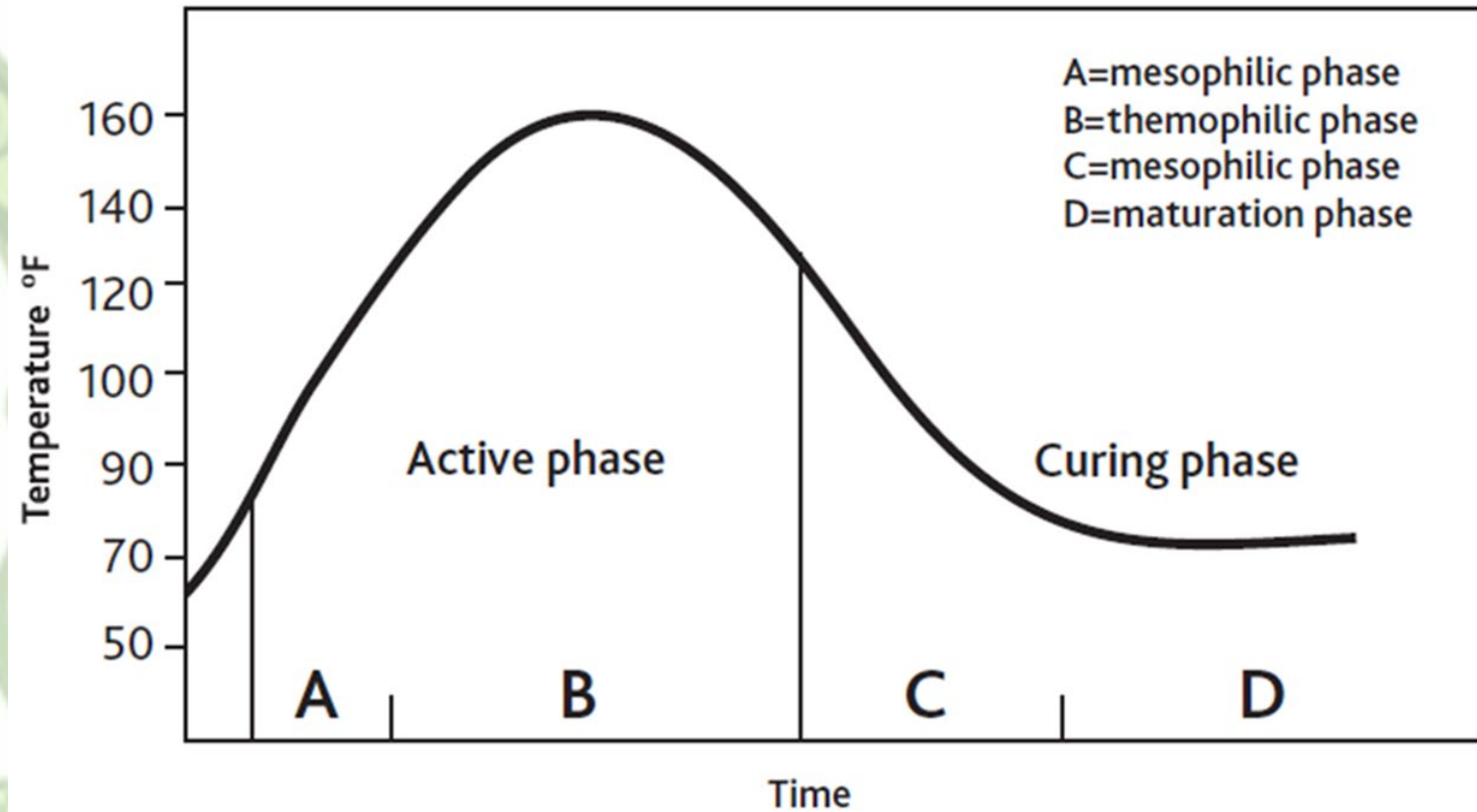
Using Your Compost Thermometer

1. Carefully insert the thermometer into the compost to reach the center of the pile.
2. Some have depth marks or you can add your own
3. Try not to use the gauge as a handle when inserting
4. Leave in place at least 1 minute, temperature should stabilize
5. Record the temperature
6. Measure daily



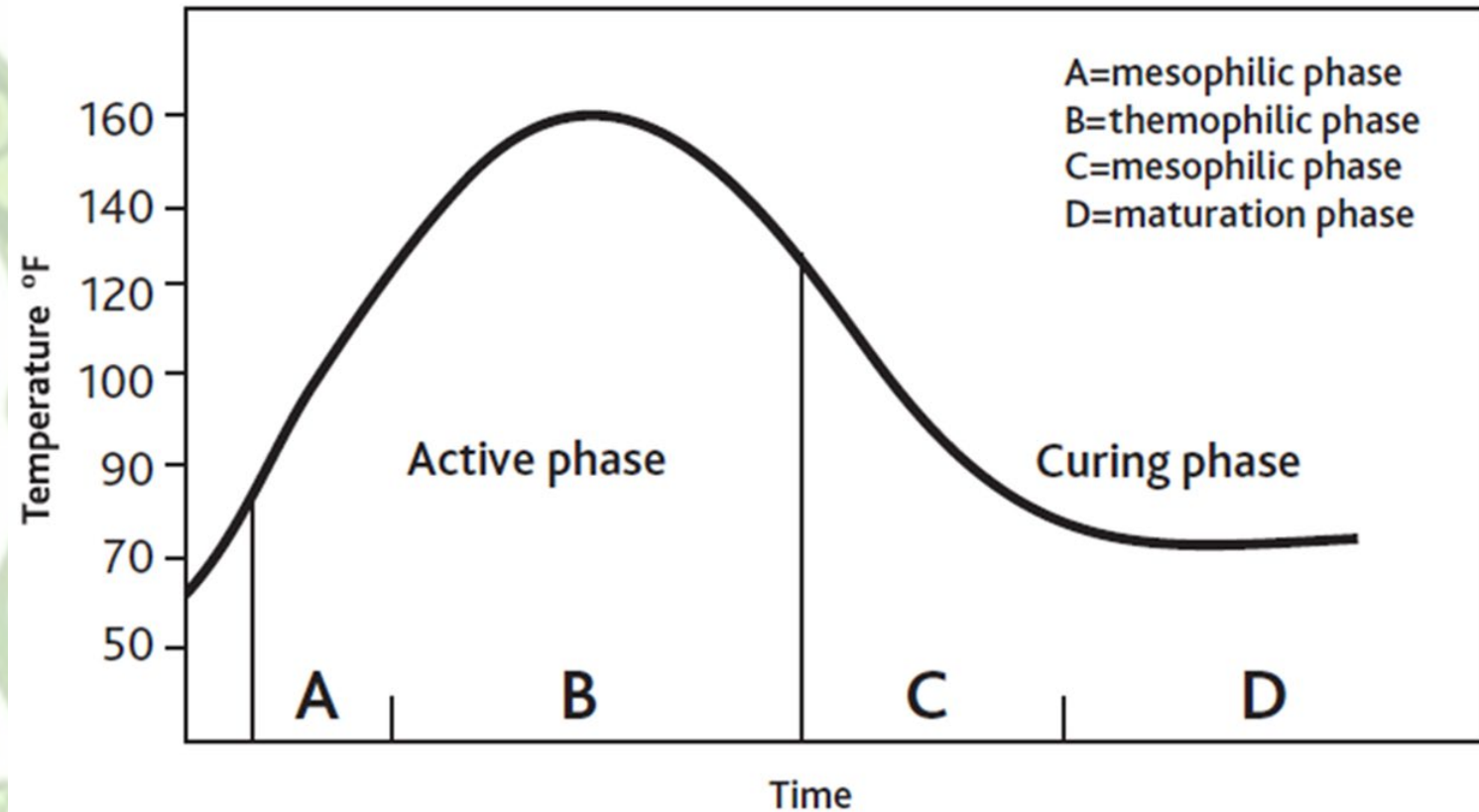
What Will the Temp Tell You

- If things going normally, you should see the curve of the 4 phase.
- When first assembled and after turning, the temperature will quickly rise to 113°F in the mesophilic stage. (Labeled A on the graph at right.)



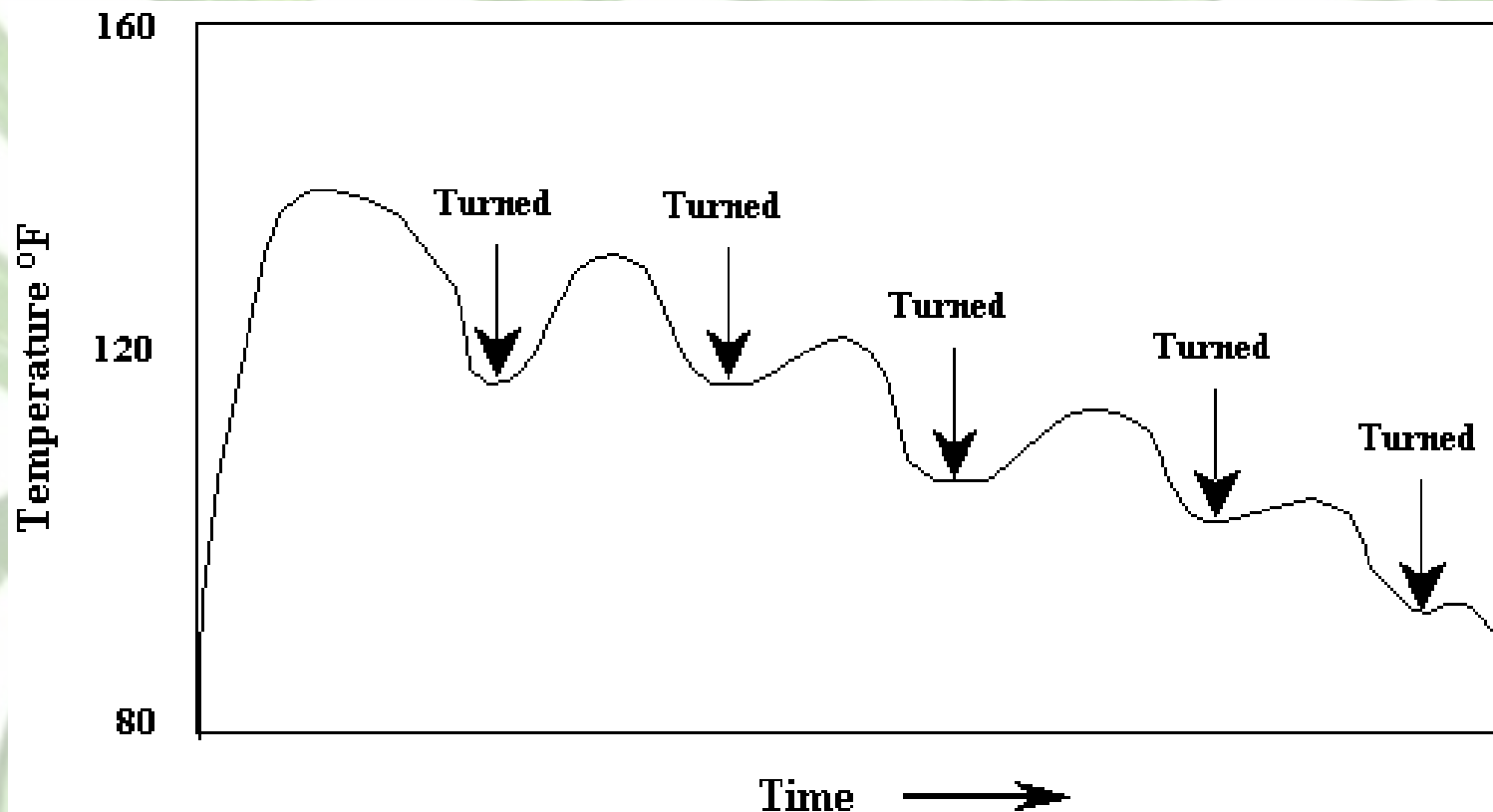
What Will the Temp Tell You

- Next the pile will enter phase 2 and the temp should continue to rise and be stable between 130-150° F (labeled B on the graph at right).



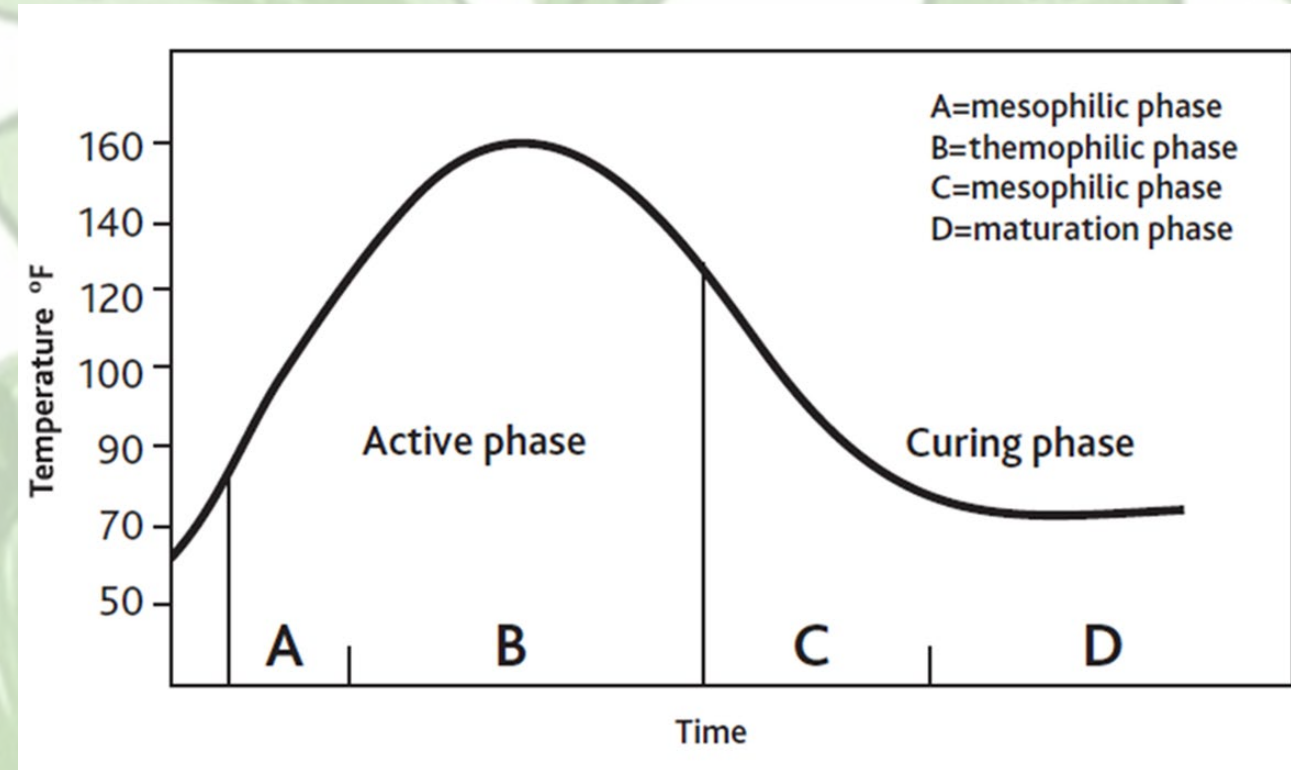
What Will the Temp Tell You

- When it begins to drop, turning will reaerate the pile sending it through phases 1 and/or 2 and where should be another rise in temp.



What Will the Temp Tell You

- Finally, when turning the pile no longer leads to a temp rise, the pile will pass through the second mesophilic phase (labeled C) and enter phase 4 and maturation begins (labeled D).



What Will the Temp Tell You

- Are pathogens and weed seeds dead. To kill these, the temp needs to be between 131°F and 170°F for three continuous days (aim for the middle ca. 155°F).
- Are beneficials still alive and kicking. Keep the temp below 175°F or they are killed. Turning helps to drop the temp if it gets too high.

Temperature Problems

Symptom	Problem	Solution
Pile is not heating up	Pile is too small	Make the pile larger.
	Pile is too dry	Add water while turning.
	Pile has too little nitrogen	Add more nitrogen (green material or other nitrogen source)



Please post all your questions and results to the message board .