

Composting

Why? What is the whole the results will support?

If you want to farm organically you have to have at least 3% SOM to support the the ecosystem required to cycle nutrients and sustain microbial support systems.

Organic growing ain't compost instead of 10-10-10.

The fastest way to increase SOM is with compost. Cover crops are more efficient, but far slower.

Composting: Managed decomposition.

Aerobic

with air

Gas off:

CO₂

NH₄

Anaerobic

without air

CH₄

aldehydes, ketones, alcohols-”stink”

For aerobic composting four things are needed ALL AT THE SAME TIME:

Carbon, Nitrogen, Water and Air. The proportions of carbon and nitrogen must be in a general range (25-50 to 1 C/N) and just little moisture but the air is usually the limiting factor.

Pile up some likely material that is moist. It will heat up, reach a temperature plateau and hang there for a while, then begin to drop. The decrease in temperature is (assuming it is not too dry) due to lack of air. If you turn it, the temperature will rise again, plateau, hang there and then begin to drop. This cycle will continue until the nitrogen has been used up or gassed off (assuming you maintain adequate moisture).

The width of these plateaus of steady temperature is determined by access to air. If the pile can breath you will need to turn it less often. The pile will draw air from the lower part and vent at the top. So, porosity is important to minimize turning. Including coarse material reduces labor, even if you choose to sift the coarse material out at the end of the process.

The heat generated by the explosion of life in the pile moves moisture out. Every time you turn the pile much moisture is lost. Dampness must be maintained. Fewer turns is desirable.

The temperature you want is over 130 degrees F and below 150 degrees F. When, with all needs met, (C, N, moisture, air) the temperature only goes up to 110 or less the material is ready to use.

Finer Points: Sir Albert added an alkalizer, lime or wood ash. If you go heavy on the carbon there

will be less ammonia gassed off, but more undigested carbon at the end of the process.