COMPOSTING SERIES

Compost Moisture Content

Composting is the active breakdown of organic matter by living organisms under aerobic conditions.

These living macroorganisms and microorganisms have several basic requirements to carry out their life processes. These include food source, oxygen and water.

The optimal moisture content for composting is 45% to 60%.

If the moisture content exceeds 65%, anaerobic conditions develop. The aerobic organisms die due to lack of oxygen, and anaerobic organisms prevail. Under these conditions, compost piles emit a strong ammonia odor.

If the moisture content is below 40%, fungi tend to be the dominate organisms. The organic matter will not fully decompose, and good, finished compost will not be produced. Once the pile gets too dry, it is hard to rewet.

If the moisture content is below 35%, the above happens, and there may be a dramatic increase in the amount of dust created.

If the moisture content is less than 15%, all biological activity ceases.

The moisture content of compost is controlled by:

- The moisture content of the materials added.
- The amount of additional water added to the compost.
- The environmental conditions.
- Under dry conditions, the moisture content goes down, and water may need to be added.
- Under rainy conditions, the compost should be covered to prevent excess moisture from developing.

Determining compost moisture content:

- Drying test.
- Moisture meter.
- Squeeze test.

44%

44-49%

49-54%

54-60%

60-65%

65-70%

70-75%

75%

The Squeeze Method – An Easy Way to Estimate Compost Moisture Content

1. Take a handful of compost from roughly 18 to 24 inches into the pile. Squeeze tightly.
2. If it feels dry and dusty, the estimated moisture content is less than 44%. This is too low.
3. If it feels mostly dry with a hint of moisture, estimated moisture content is 44-49%. This is the lower limit.
4. If it feels tacky and sticks together, estimated moisture content is 49%-54%. This is OK.
5. If it feels moist but no water comes out, estimated moisture content is 54%-60%. This is ideal.
6. If it leaves a wet sheen on your hand after squeezing, estimated content is 60%-65%. This is the upper limit.
7. If one to two 1-2 drops of water come out when squeezed, the estimated moisture content is 65%-70%. This is too wet.
8. If many drops of water come out when squeezed, the estimated moisture content is 70%-75%. This is too wet.
9. If a stream of water comes out, or it has a pudding texture, estimated moisture content is greater than 75%. This is far too wet.

What to do if compost is too wet!

- Cover with tarp (prevent influx).
- Add dry bulky materials, like newspaper or straw (absorb moisture and increase airflow).
- Turn the pile.
- Create good drainage conditions.
- What to do if compost is too dry!
- Cover with tarp (prevent efflux).
- Add materials with high water content (veggies, grass clippings).
- Add water mixing as you go.

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Pub. 3838-C (Online Only) 04/22
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Funding for this publication is provide by the USDA NIFA FSOP Award #: 2020-70020-33035