COMPOST GUIDELINES

Logan Labs, 620 North Main Street, Lakeview, OH 43331
937-842-6100 | www.loganlabs.com

GENERAL

< 1% of a compost application may actually become stable soil humus (depending on soil conditions, climate, and the way the soil is managed).

- If compost being used is 50% organic matter, it would take 40,000 lbs (20 tons)per acre to temporarily raise the soil organic matter by 1%.
- Applications of > 30 tons per acre are not recommended unless incorporated into the soil.
- Like layers of topsoil, layers of compost can disrupt the flow of air and water through the soil, with incorporation into the subsoil preferable.
- Compared to topsoil, compost usually contains little or no weed seeds.

EVALUATING COMPOST LAB ANALYSIS

Organic Matter

Desired Range, depending on feedstock = 40-60%

- Lower levels may be due to significant amounts of soil added during processing.
- Higher amounts may indicate naturally low mineral content of ingredients
- Component most responsible for improving existing soil: composts with lower levels will need to be applied in relatively greater amounts to provide the same benefits that composts with considerably higher levels will provide

pH

Should be near neutral - desired range = 6.0-8.0

- Biological activity that creates compost cannot function at extremely high or low pH levels
- It is more unusual to find a compost with a pH lower than 6.0 than it is to find one with a pH higher than 8.0
- Compost with a high pH can contribute toward neutralizing an acid soil, but may create more problems on an already too alkaline soil
- A slightly acid compost will rarely have an effect on a very acid soil, but may provide some neutralization on alkaline soils
- Amendments to correct pH would be best applied after the compost has been incorporated

Moisture Levels

Moisture Levels do not make a significant difference in the quality of the finished product or the effect it has on the soil (unless excessively wet or dry), but may have some economic impact.

- 10 ton load at 50% moisture contains 5 tons of water – if hauled long distances, the cost of trucking the water becomes a significant expense.
- Soggy (high moisture content) composts have relatively lower levels of everything else, including organic matter and nutrients

Conductivity

Conductivity measures the level of soluble salts.

- Very important if compost is used for seeding projects
- Levels > 3 mmhos need to be diluted with soil (1 mmhos = 640 ppm salt)
- Generally compost salt levels are not dangerous to established lawns/turfs
- Levels < 3 mmhos can be used as a seed carrier: where compost is pre-mixed with seed and the two are applied together. Good spot seeding technique because compost holds more moisture than soil and contains compounds that enhance seed germination.

Nutrient Levels

Nutrient Levels in compost normally are not high.

- It is rare to find N levels > 3% and all other nutrients are usually lower.
- Phosphate is often about 1/3 the level of N and Potash is often about 2/3 the level of N
- Micronutrients are generally found in trace amounts, but can vary if raw materials containing high levels of certain nutrients were composted.
- If a one-inch layer is incorporated into 1000 ft2 of soil, and contains only 1% N, more than 30 lbs of total N have been applied. This may seem excessive (and would be with conventional fertilizers), but compost will release N slowly without burn potential and provides valuable food for soil biology.