C & C Peat Co., Inc.

Premium Quality Potting Media

(800) 330-4866

http://www.ccpeat.com

info@ccpeat.com

Technical Information for C&C Peat Company's Compost

As a key component in Enviro-Peat® and other potting media mixes

C&C Peat is currently composting materials taken primarily from many horse farms in Marion County, as well as secondarily from land clearing debris. This material is brought into our fully licensed composting facility where it will undergo a rigorous series of treatments to be transformed into a useful product for plant growth. To ensure quality control we are restricting our feedstock source. It is difficult to determine what pesticides or other chemicals might be in home yard debris, so we are not taking this material as part of our compost feedstock. Because of this control, we have the ability to maintain a consistent level of nutrient content.

After entering our facility, the material to be composted is placed in long windrows. These windrows will be treated with moisture, as is needed, in order to maintain aerobic composting. Through the first 15 days, each windrow will be turned at least 5 times; the compost is then stabilized for 75 days and cured for an additional 30 days. This allows the windrows to maintain higher oxygen content, reducing odors and assisting beneficial microbes. Through the turning process, the compost will maintain a temperature of at least 131 degrees Fahrenheit, reaching a peak temperature of 155 degrees Fahrenheit before turning. This is accomplished through the decomposition of the feeder material.

Pathogenic organisms such as bacteria, viruses, fungi, and protozoa are found in small or background concentrations with other living organisms everywhere on earth. The concern for human, animal, and plant health from pathogens comes when these organisms are found in large concentrations. Larger concentrations of pathogens are found in animal and pet manures and biosolids. When these materials are used as a feedstock, the following standards must be followed to prevent a health risk.

The EPA in Part 503 sets standards for the destruction and concentration of pathogens in composted biosolids. The standards set in Part 503 are often used as marketplace specifications for compost or soil amendment sold for public use. By maintaining these standards, the following harmful pathogens are destroyed:

Pathogen	Temperature at Time of Pathogen Death
Salmonella typhosa	No growth beyond 115ºF, death within 30 minutes at 131-140ºF, or within 20 minutes beyond 140ºF
Salmonella sp.	Death within 1 hour at 131ºF or within 15-20 minutes at 140ºF
Shigella sp	Death within 1 hour at 131ºF.
Escherichia coli (E. coli)	Most die within 1 hour at 130ºF or all within 15-20 minutes at 140ºF.
Entamoeba histolytica cysts	Death within a few minutes at 113ºF or within a few seconds at 131ºF.
Taenia Saginata	Death within a few minutes at 131ºF.
Trichinella spiralis larvae	Death at 131ºF.
Brucella abortus	Death within 3 minutes at 147-145ºF or within 1 hour at 131ºF.
Micrococcus pyogenes var. hominis	Death within 10 minutes at 122ºF.
Streptococcus pyogenes	Death within 10 minutes at 130ºF.
Mycobacterium tuberculosis var. hominis	Death within 15-20 minutes at 151ºF or momentarily at 153ºF.
Corynebacterium diphteria	Death within 45 minutes at 131ºF.
Necator americanus	Death within 50 minutes at 113ºF.
Ascaris lumbricoides eggs	Death in less than 1 hour at temperatures over 122ºF

In the first 15 days of composting (the "thermophilic" phase) temperatures reach as high as 155 degrees, but never lower than 131 degrees, resulting in all weed seeds being destroyed. Many of these seeds were present as the result of being accidentally incorporated in the feed given to horses, as well as from windblown sources. Once the minimum temperature of 131 degrees is reached, these seeds are no longer a problem. (http://www.cias.wisc.edu/pdf/artofcompost.pdf)

In addition to the reduction of potentially harmful pathogens and weed seeds, the composting process allows for the control of heavy metal concentrations that must remain below a regulated level, per IAC105.3 (455B, 455D). The specific heavy metal maximum concentrations permitted are:

	Arsenic	Cadmium	Copper	Lead	Mercury	Nickel	Selenium	Zinc
Parts per million	41	39	1500	300	17	420	36	2800

Typical Nutritional Analysis

Soil pH	Soluble Salts (mmhos/cm)	Nitrogen ppm	Phosphorus ppm	Potassium ppm	Calcium ppm	Magnesium ppm	Iron ppm	Manganese ppm	Zinc ppm	Copper ppm	Boron ppm	Sulfur ppm
7	1.24	169.0	320.0	1497.0	2233.0	199.0	4.0	3.0	5.0	1.0	1.0	169.0

Fertilizers ◊ Quality Potting Media ◊ Quality Service

1650 County Road 470
Okahumpka, FL 34762
Office: (352) 323-8213
Fax: (352) 365-0367