

Directions

Indoor / Outdoor / All Year

Vegetables and Annual Flowers

Line bottom and sides of plant holes and seed furrows with 1-2 inches of castings. Set seeds or plants in place and cover with soil. Side dress during growing seasons at a rate of 1 cup per plant or 2 cups per linear foot of row, once every 2 months.

Perennials

Work 1 cup of castings into the soil above root zone, taking care not to damage shallow roots. Apply in spring, early summer and early fall.

Potted Plants and Seeds / Seed Flats

Potting mix - Use 1-part castings / 2 parts soil.

Potted Plants, Hanging Baskets

Add 1-2 inches of castings to top of soil. Mix in taking care not to damage shallow roots water – repeat every 2-3 months.

Roses, Trees, Shrubs and Berries

Mix 1 part castings to 2 parts soil. Surround newly dug hole with mixture. Spread roots over mound of the mix in the hole and cover.

Roses – Established

Mix 4 cups castings into soil, 2-3 inches below surface for each plant.

Lawns – New

Apply 10-15 lbs per 100 sq. ft. Work lightly into the topsoil. Mix in grass seed and water well.

Lawns Established

Distribute as top dress – 10-15 lbs. per 100 sq. ft.

Castings Tea

Soak 1 part castings in 3 parts water for 12-24 hours. Stir well, water as usual. Castings tea is excellent for fruiting, flowering, or difficult to access potted plants.

Compost Piles

Spread a thin layer of castings between each new layer of material to be composted.



Benefits of Worm Castings

1. The humus in the worm castings extracts toxins and harmful fungi and bacteria from the soil. Worm Castings therefore have the ability to fight off plant diseases.
2. The worm castings have the ability to fix heavy metals in organic waste. This prevents plants from absorbing more of these chemical compounds than they need. These compounds can then be released later when the plants need them.
3. Worm Castings act as a barrier to help plants grow in soil where the pH levels are too high or too low. They prevent extreme pH levels, making it possible for plants to absorb nutrients from the soil.
4. The humic acids in Worm Castings stimulate plant growth, even in very low concentrations. The humic acid is in an ionically distributed state in which it can easily be absorbed by the plant, over and above any normal mineral nutrients. Humic acid also stimulates the development of micro flora populations in the soil.
5. Worm Castings increase the ability of soil to retain water. The worm castings form aggregates, which are mineral clusters that combine in such a way that they can withstand water erosion and compaction, and also increase water retention.
6. Worm Castings reduce the acid-forming carbon in the soil, and increase the nitrogen levels in a state that the plant can easily use. Organic plant wastes usually have a carbon-nitrogen ratio of more than 20 to 1. Because of this ratio, the nitrogen is unavailable to plants, and the soil around the organic waste becomes acidic.



MAGIC Worm Ranch

"It's ALIVE"

With Powerful
Microbials & Bacteria

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832.530.9271

The richest, natural, soil nourishment known to humans. That's right! As little as a tablespoon of pure worm castings provides enough organic plant nutrients to feed a 6" potted plant. Worm castings stimulate plant growth more than any other natural product on the market. Unlike manufactured, artificial fertilizers, it is absorbed easily and immediately by plants. But Worm Castings don't only stimulate plant growth, they also enhance the ability of your soil to retain water (because of its texture), and it even inhibits root diseases such as root rot.

Worm Castings contain a highly active biological mixture of bacteria, enzymes, remnants of plant matter as well as earthworm cocoons. (While damp) The castings are rich in water-soluble plant nutrients, and contain an incredible 300+ pounds per acre of nitrogen cycling potential.

Worm Castings are packed with minerals that are essential for plant growth. There are high quantities of very concentrated nitrates, phosphorus, magnesium, potassium and calcium. These Worm Castings also contain manganese, copper, zinc, cobalt, borax, iron, carbon and nitrogen. However, the best of all is that these minerals are immediately available to the plant, without the risk of ever burning the plant. Remember that animal manure and chemical fertilizers have to be broken down in the soil before the plant can absorb them.

Worm Castings can be used as an ingredient of potting soil (as plant nutrients) for plants in and around the house. It can also be used as a planting additive for trees, vegetables, shrubs and flowers. When used as mulching material, Worm Castings will ensure that the minerals are absorbed directly into the soil when it is watered. Because Worm Castings will never burn plants, you can use as much as you like.

Plant Available Nutrients

Report prepared for:

MAGIC
Worm Ranch
 Gary A. Green
 Plantersville, TX 77363 USA

Sample #: 01-131570
 Unique ID: Earthworm Castings
 Material Type: Compost
 Invoice Number: 18486

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For interpretation of this report please contact your local Soil Steward or the lab.

TEST	RESULTS (ppm)	POUNDS/TON
pH	7.0	6.0-7.5
Calcium (Ca)	371	331-444
% Organic Matter	13%	5+%
Less Humus - More Castings 87%		
Soluble Salts	486.4	177-426
Nitrates (NO3)	100	10-20
Ammonium (NH4)	7.54	5-15
Phosphate (HPO4)	38.3	2-5
Potassium (K)	754	5-25
Magnesium (Mg)	87.9	74-99
Iron (Fe)	1.23	0.5-5.0
Manganese (Mn)	16	0.5-5.0
Boron (B)	0.55	0.06-0.5
Copper (Cu)	0.06	0.06-0.5
Zinc (Zn)	0.02	0.3-3.0
Sulfates (SO4)	36	4-15
Chlorides (Cl)	134.5	0-30

Calcium is used by plants in cell membranes, at their growing points and to neutralize toxic materials. In addition, calcium improves soil structure and helps bind organic and inorganic particles together.

Nitrogen helps plants make the proteins they need to produce new tissues. In nature, nitrogen is often in short supply so plants have evolved to take up as much nitrogen as possible, even if it means not taking up other necessary elements. If too much nitrogen is available, the plant may grow abundant foliage but not produce fruit or flowers. Growth may actually be stunted because the plant isn't absorbing enough of the other elements it needs.

Phosphorous stimulates root growth, helps the plant set buds and flowers, improves vitality and increases seed size. It does this by helping transfer energy from one part of the plant to another.

Potassium improves overall vigor of the plant. It helps the plants make carbohydrates and provides disease resistance. It also helps regulate metabolic activities.

Magnesium is the only metallic component of chlorophyll. Without it, plants can't process sunlight.

Chloride is an essential micronutrient and all crops require it. It plays some important roles in plants, including in photosynthesis, osmotic adjustment and suppression of plant disease.

**The Key Nutrients
 for
 Spectacular Plant Growth**

Compost Detail

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Assay Name	Result	Units	Desired Level	Commentary
Organism Biomass Data				
Dry Weight	0.55	N/A	0.20 to 0.80	Within normal moisture levels.
Active Fungi	4.1	µg/g	> 3.00	Fungal activity observed.
Total Fungi	2,147.05	µg/g	> 300.00	Good fungal biomass. - Good fungal diversity. Hyphal diameter: 1.5 to 6.5 µm.
Hyphal Diameter	2.95	µm	> 2.50	Good balance of fungi.
Active Bacteria	23.58	µg/g	> 3.00	Bacterial activity Excellent Bacteria Activity
Total Bacteria	1,477.98	µg/g	> 300.00	Good bacterial biomass. -
Actinobacteria	36.47	µg/g		
Organism Biomass Ratios				
FF:TB	1.45		0.01 to 10.00	Balanced fungal and bacterial bio
AF:TF	0.13		< 0.10	Fungal activity observed.
AB:TB	0.02		< 0.10	Good bacterial activity.
AF:AB	0.03		0.01 to 10.00	Fungal dominated, becoming more bacterial.
Protozoa (Protists)				
Flagellates	17,744.59	number/g	> 10,000.00	Species diversity.
Amoebae	503,578.21	number/g	> 10,000.00	
Ciliates	0.00	number/g	< 5113.00	
Nitrogen Cycling Potential	300+	lbs/acre		Nitrogen levels dependent on plant needs. Estimated availability over a 3 Month period



Cytokinin induces expanding and division of shoot buds.
Auxin induces root formation for support.

Wonder which one has the
MAGIC
 Earthworm Castings?

