

FERTILIZERS ARE NOT ALL MADE THE SAME

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In the Master Gardener circle, over and over you will hear gardens powered by rabbits are the very best gardens. Rabbit manure is referred to as super fertilizer, bunny gold and many other great names. In this article I will share why that is.

There are two basic categories of fertilizers, chemical and organic. Fertilizers supplement a soil's native nutrient supply. They are essential to good plant growth when the soil nutrient supply is not adequate. Rapidly growing plants, such as vegetables, generally need more nutrients than slower growing plants such as perennials. What each fertilizer type does for the plants is essentially the same but the difference is in how it is available to the plants, duration of availability and the soil structure benefits.

Chemical fertilizers are manufactured by man or are made from natural ingredients, concentrated to make the nutrients more available to plants. You don't have to wait for them to break down to go to work. The nutrients they have are made available as soon as it's applied. Chemical fertilizers supply nutrients for the plants only and do nothing for the structure or composition of the soil. The nitrogen in chemical fertilizers is vulnerable to leaching loss from heavy rain or irrigation. Once the nitrogen moves below the root zone, it is no longer available to the plants and may leach into groundwater. Chemical fertilizers are not available long term and require more frequent applications. More recently the chemical companies have gotten better about encapsulating their fertilizers for "timed released" applications but it's still not comparable to the time release properties of organic manure sources.

Organic fertilizers are natural products that have undergone little or no processing and come in a variety of forms. They include both biological (plant and animal) and mineral materials. Some of the most common forms are manure, blood meal, alfalfa, bat guano, chicken manure, fish emulsion, bone meal, horse manure, kelp meal, rabbit manure, steer manure... the list is actually quite extensive. Each has its own unique nutrient properties. Typically organic fertilizers are slow-release because their nutrients become available to plants over the course of the growing season. They are in a less concentrated form than chemical fertilizers. One of the major benefits to organic fertilizers is it adds to the composition of the soil (a very big perk to gardeners). It helps to hold in moisture and promotes healthier root growth. It naturally helps to maintain the ph balance in your soil. Side by side, organic fertilizers will out perform chemical fertilizers in the long term.

Fertilizer 101. All fertilizers are rated on its primary nutrients. On the side of the commercial bags and containers, you will notice a three number system. This is standard throughout the fertilizer industry. The first number indicates the



percentage of Nitrogen (N). The second number indicates the percentage of Phosphorous (P) and the third is Potassium (K). A "complete" fertilizer is one with a nutrient value in each category. All organic fertilizers are complete fertilizers. The only incomplete fertilizer you will find are chemical/man-made compositions (ex: 21-0-0).

Here are some examples of manure ratings,:

	N (%)	P (%)	K (%)
Bat Guano	5.7	8.6	2.0
Beef Steer	2.0	.65	1.6
Chicken	3.6	1.3	1.3
Dairy Cow	3.3	.35	2.0
Horse	2.5	.25	.80
Rabbit	4.8	2.8	1.2
Sheep	3.5	.55	1.0

As you look at this list, you are probably wondering what is the big deal about rabbit manure. Now here is the bells and whistles of those "magic grow pellets". Every one of the fertilizers on this list had to be composted so it wasn't "hot" or so potent... *with the exception of the rabbit manure.* Rabbit zoo-do can be spread directly in the garden. Talk about an easy fertilizer to use! As the pellets breakdown, it builds and stabilizes the soil structure, reducing erosion, improves soil porosity and drainage. It holds water and nutrients for plants and soil organisms. It is a long term, slow release storehouse for the nutrients, which continuously become available as the soil microorganisms break down organic matter. Your amended soil will foster all kinds of earthworms, which in return will be working your soil from beneath, making an even better garden environment. Worm manure is good stuff too (1.5-2.5-1.5). Speaking of worms... you can grow some serious fishing worms in the right environment. You probably guess it already... with rabbit manure.

When is the best time to apply manure? Typically in the early spring. You can also apply in the fall, but some of the nutrients may be lost in the winter. Fall applications are best accompanied with cover crops to hold in the nutrients. Consult your local extension office for recommendations on appropriate cover crops for your area. The beauty of using rabbit manure is you can also apply more during the growing season with the same benefits. Depending on how many rabbits you are currently hosting, you might consider sharing with your friends and neighbors. Within one growing season, they will be hooked on "magic grow pellets" too.

1. Cooperative Extension Service, University of Illinois
Columbia County Master Gardeners website; <http://www.mstrgardener.org/>