

ERGOFITO IN ACTION

Give Nature What Nature Wants

Horse Manure Management & Composting



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Manure:

Manure is organic matter, mostly derived from animal feces except in the case of green manure, which can be used as organic fertilizer in agriculture. Manures contribute to the fertility of the soil by adding organic matter and nutrients, such as nitrogen's that are trapped by bacteria in the soil. It is also a product obtained after decomposition of organic matter like cow dung which replenishes the soil with essential elements and adds humus to the soil.

Daily Production:

A 500 kg adult horse will produce 25 Kg of feces and approximately 35 liters of urine per day. Urine mixed with bedding can double its weight to 60 to 70 Kg of waste, resulting in a total of 75 Kg of waste daily.

Negative Aspects of Horse Manure:

The combination of dung and urine is a perfect medium for the proliferation of bacteria destructive to the horse's hoof. When certain fecal bacteria ferment, their secretions can chemically dissolve the inter-tubular "hoof cement". Dung and urine can break down the integrity of hoof horn. Moist manure mechanically softens, loosens, and encourages the breakdown of hoof horn structure. In addition, the pungent vapors of manure and urine can be irritating to the eyes and lungs of both horses and humans.

Wherever there is manure, there are parasite larvae. The life cycle of all horse parasites involves leaving the horse host via the manure and then re-infesting a new host. Parasite larvae can do great internal damage to a horse as they migrate through the tissues. When a horse eats from manure-contaminated ground, he ingests parasite eggs. Along with deworming horses every two months to decrease the number and viability of the parasite eggs that are shed, the daily removal and proper management of manure is the best way to break the parasite life cycle.

Stable flies breed in decaying organic matter. Moist manure is perfect breeding medium for flies. The life cycle of stable flies is 21 to 25 days from egg to adult. A female often lays twenty batches of eggs during her thirty-day life span. Each batch contains between 40-80 eggs. When the eggs hatch, the adult flies emerge ready to breed. The number of flies produced by one pair of adults and their offspring in thirty days is a staggering figure in the millions.

That's why fly prevention is essential to keeping the fly population under control. Optimum fly control begins with removing the breeding grounds and controlling moisture, important aspects of manure management.

Positive Aspects of Manure:

About one-fifth of the nutrients, which a horse eats, are passed out in the manure and urine. If the manure is properly handled, about half of those excreted nutrients can be utilized by pasture or crop plants in one growing season with the balance being used in subsequent years. Horse manure is considered one of the most valuable of farm manures, being quite high in nitrogen and "hot" or capable of fermentation. A ton of horse manure

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will supply the equivalent of a one 50 Kg sack of 14-5-11 fertilizer as well as providing valuable organic matter and trace elements.

Fertilizer numbers designate the nitrogen-phosphorus-potash content, in that order.

Treating Horse Manure with Ergofito:

Disposing of manure without further usage impacts on nature negatively, at the same time a loss of precious natural and ready to use fertilizer occurs. Raw manure cannot be used as is as it will impact on the soil balance by adding additional workload in terms of decomposition and Nitrogen availability.

By adding **Ergofito Manure** to the mix, a complete natural fertilizer can be made within a four weeks cycle. Due to the negative impact of raw manure on the stable's floor as mentioned above, it is imperative to apply **Ergofito Manure** in the stable in the following manner and protocol:

1. Mix 10 grams of **Ergofito Manure** per square meter of the horsebox with 1 liter of water.
2. Spray all manure and floor with the above mixture once a day.
3. When all manure and material is collected, pile it in the open air for a period of four weeks. (in the event of heavy rains, cover the pile)
4. During the four weeks, a high level of decomposition takes place due to the high level of bacterial activity by **Ergofito Manure**
5. It is recommended that the Nitrogen level is checked prior application to soil as it may or may not be needed.

Nitrogen in Horse Manure:

As mentioned a horse will produce roughly 35 Kilos of Urine daily. This urine contains 3% of Nitrogen. Each horse will contribute about 1 Kg of Nitrogen per day. A large part will dissolve in the air during transport and composting, but a large part will remain and contribute the intrinsic value of horse manure fertilizer.

Conclusion:

Organic fertilizer is in today's world a prime component to sustainable agriculture. Using it without proper bacterial activity will impact negatively on the welfare of any plant when used regularly.

Once the bacterial activity is introduced via **Ergofito Manure**, the product requires little preparation or work and in just four weeks can be safely application on any crop.



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