

Magic Beans

Llama Beans
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Everyone knows the story of “Jack and the Beanstalk”: how he trades for some magic beans and grows a beanstalk. After this, the story differs, but in every version of the story Jack trades for beans! Everyone assumes he trades for *magic* bean seeds, but the story never specifies. What if they are *lama beans*?

The manure of lamas (including both alpacas and llamas) is called beans, probably because of its shape. Lama beans have some amazing qualities as fertilizer and could very well have once been used to grow a giant beanstalk!

Application

There are three ways frequently used to apply lama beans to plants.

Dissolving

Adding roughly one cup of beans to about a gallon of water, and then letting it soak overnight is often called “tea”. This process dissolves the beans and soaks out the nutrients into the water. This water is then used to water plants. The beans will not dissolve completely in one night of soaking and can be reused until they do.

Mixing With Soil

Lama beans can be mixed with potting soil when transplanting or moving plants. Lama beans can also be used in place of compost in gardens.

Applying Directly

Lama beans do not burn plants when applied directly, even when the beans are fresh. The beans can be applied in spoonfuls to smaller plants and applied in handfuls to larger plants and trees. The fertilizing qualities of the beans are released to the plant when it is watered.

Safe for You and Your Plants!

***E. coli* is a bacteria commonly found in warm-blooded animals, that mostly isn't harmful to humans. However, *E. coli* o157 is harmful and can sometimes lead to death. Fortunately, lamas are not known to carry *E. coli* o157.**

When using manure for fertilizer, the manure is often left to age before being spread onto the plants so it doesn't burn the plants. Lama beans can be spread directly on your plants, even without aging, with absolutely no fear of burning your plants!

Plant Fertilizer

All plants need 17 essential elements to thrive. Of these, 14 come from the soil and the other three come from air, water, or fertilizer. The three elements are:

Nitrogen

Plants need more nitrogen than any other element. Nitrogen insures that plants collect enough protein and, in turn, have strong tissues.

Phosphorus

Phosphorus strengthens a plant's ability to perform photosynthesis which is essential for the plant's survival.

Potassium

Potassium strengthens plants' ability to resist disease and plays an important role in the plants' crop/flower production.

<u>Animal</u>	<u>Nitrogen</u>	<u>Phosphorus</u>	<u>Potassium</u>
Lama	1.7 %	0.69 %	0.66 %
Chicken	1.0 %	0.8 %	0.4 %
Sheep	0.95 %	0.35 %	1.0 %
Horse	0.7 %	0.25 %	0.55 %
Cow	0.6 %	0.15 %	0.45 %
Pig	0.5 %	0.35 %	0.4 %

Miracle-Gro all purpose plant food	24 %	8 %	16 %
Scotts Turf builder lawn food	32 %	0 %	4 %
Jobe's Organics bone meal plant food	2 %	14 %	0 %

Weeds

Lamas are modified ruminants, meaning that like cattle, sheep, and goats, lamas have one stomach with multiple compartments. True ruminants have four compartments, so camelids with three compartments are modified ruminants. The three compartments remove all weed seeds from the beans, making the beans an even better fertilizer!

Collection

Lamas use communal dung piles, making their pastures cleaner and their beans easier for collection! One adult llama produces at least 56 lbs. of beans weekly! Lama farms with dozens or hundreds of lamas have piles and piles of these beans! The combination of odorless manure and lack of circulating flies around the dung piles makes it more pleasant for collecting for the garden!

- **Odorless compared to other manure fertilizers!**
- **Lightweight for carting.**
- **Acts as a natural insecticide!**
- **It's manure qualities keep deer away!**
- **All manure fertilizers help control root diseases and adds essential nutrients to the soil.**
- **The beans don't spread weeds!**
- **It can be spread without aging directly at the base of plants or used for creating a nutrient-rich "tea" to drench or spray.**
- **Llamas are not known to transmit *E. coli* to humans!**

Sources

Brazier, Yvette. “E. Coli Infection: Symptoms, Causes, and Treatment.” *Medical News Today*, MediLexicon International, 11 Dec. 2017, www.medicalnewstoday.com/articles/68511.

“Ruminants.” *Cattle.ca*, 0AD, www.cattle.ca/assets/Uploads/232d540861/ruminants.pdf.

Duren, Stephen. “Ruminants And Camelids Digestive Overview & Forage Feeding Instructions.” *Standlee Forage*, 0AD, [standleeforage.com/nutrition/nutritional-papers/ruminants-camelids-digestive-overview#:~:text=Camelids%20are%20modified%20ruminants%20or,%2C%20cattle%2C%20deer\)%20four](http://standleeforage.com/nutrition/nutritional-papers/ruminants-camelids-digestive-overview#:~:text=Camelids%20are%20modified%20ruminants%20or,%2C%20cattle%2C%20deer)%20four).

“Fertilizer 101: The Big 3 - Nitrogen, Phosphorus and Potassium.” *TFI*, 31 Oct. 2016, www.tfi.org/the-feed/fertilizer-101-big-3-nitrogen-phosphorus-and-potassium.

Fields, Harry. *Llama Keeping: Raising Llamas-- Step by Step Guide Book ... Farming, Care, Diet, Health and Breeding*. World Ideas Ltd./ BLEP Publishing, 2014.

Adamson, Rebecca, et al. “Chapter 5 - Use, Marketing, and Careers.” *Lamas Book 3*, Purdue Extension, 2008, pp. 40–41.