



ARTILLERY FUNGUS

SUPPRESSED BY

BLENDING FRESH MUSHROOM COMPOST WITH LANDSCAPE MULCH

Q: What is the artillery fungus?

A: The artillery fungus is a wood-decay fungus that lives in wet landscape mulch. It produces a fruiting body that orients toward bright surfaces, such as light-colored houses or even parked cars in mulched parking lots. The artillery fungus then shoots black, sticky spore masses towards the light or reflected light. Spores can be windblown as high as the second story of a house. The spores stick to their target, remaining almost impossible to remove without leaving a stain, and look like splattered tar. For more information, go to:

<http://www.personal.psu.edu/faculty/d/d/ddd2/>

The artillery fungus has become a serious problem in recent years, especially on sides of houses next to foundation landscape mulch. Dr. Donald Davis¹ and Dr. Michael Fidanza² at Penn State have been working on various solutions to combat this problem. One of their more recent findings has been that adding fresh mushroom compost to landscape mulch will suppress the artillery fungus.

Q: What, specifically, have the Penn State researchers found?

A: Drs. Davis and Fidanza have found that fresh mushroom compost successfully suppresses artillery fungus when a landscape mulch blend consists of $\geq 40\%$ fresh mushroom compost. Mushroom compost most likely is supplying beneficial microbes that compete against the artillery fungus.

Q: Are there any commercial mulch producers offering such a blended product?

A: On June 18, 2008 the first commercial on-site blending of mushroom compost and landscape mulch was completed. A 40% mushroom compost/landscape mulch blend was then transported to a residential site in West Chester, PA, where Gloria Day, owner-operator of Pretty Dirty Ladies Inc., Garden Design & Maintenance³, applied the blend to combat a serious artillery fungus problem.



Q. Are there other benefits to adding mushroom compost to landscape mulch?

A. Mushroom compost is an excellent organic soil amendment, adding plant nutrients, beneficial microbes, and providing soil moisture retention. It can be blended with mulch at various rates, but if at least 40% mushroom compost is used, you will get the added benefit of artillery fungus suppression, even if you are adding mushroom compost for other reasons.

Q. Along this line, does adding mushroom compost to landscape mulch change the available nutrients to plants?

A: Adding mushroom compost contributes plant nutrients (approximately 1:1:1 N:P:K). Mushroom compost is recognized by the Pennsylvania Department of Agriculture as a registered fertilizer.

Q: Does Mushroom Compost smell? How about when it's hot?

A: You may notice an earthiness at time of installation which quickly disappears after installation.

Q. Is blended mulch affected by weather conditions?

A. Mushroom compost retains its appearance, holds moisture during drought, and filters water during heavy rains. In the long haul, mushroom compost will biodegrade and improve the health and organic quality of landscaped beds.

Q. My contractor wants to know what impact the blend will have on his equipment; especially at high concentrations of mushroom compost.

A. Your contractor may have been using aged mushroom compost, which often has higher moisture content than fresh mushroom compost. The added moisture in aged mushroom compost may cause it to hang up in trucks and buckets, so fresh is mushroom compost your best choice.



Additionally, elaborate mixing processes associated with blending mulches do not apply when blending landscape mulch with mushroom compost. The blending that took place on June 18, 2008 was done with a front end loader. Buckets of mushroom compost and landscape mulch were alternately mixed and blended using the bucket of the front end loader. During transportation and application, further blending naturally occurred. Depending on the location and size of the site, blending may be done on site.

Q: Does mushroom compost blended with landscape mulch deteriorate or decompose faster than landscape mulch without mushroom compost?

A: The answer may depend on the percentage mushroom compost being blended, as well as the age of the mushroom compost. Over time, mushroom compost will decompose, but this decomposition organically improves soil quality and therefore plant health.

If the mushroom compost in your blend deteriorates at a faster rate than the blended mulch, an on-site addition of fresh mushroom compost, or a regularly-scheduled application of mushroom compost/landscape mulch blend will continue to suppress the artillery fungus while naturally beautifying your beds.

Q. What is the color of mushroom compost? Will it fade?

A. Mushroom compost is brown to black. The blended color will depend on age of mushroom compost, type of mulch, and percentage of the blend. Generally speaking, mushroom compost adds an attractive, rich earthy tone to landscaped beds.

Q: What about pH and salts?

A: Published Penn State research data using 30 random samples of mushroom compost has shown an average pH of 6.62. The salts in mushroom compost are actually nutrient salts, which are made available to plants through watering or rainfall.

Q: Will mushroom compost blended in my mulch harm my plants and flowers?

A: As matter of fact, a mushroom compost/landscape mulch blend is highly beneficial to your plants and flowers. Mushroom compost is a made of predominantly organic materials that can enhance the health of your landscaped beds.

By adding mushroom compost to your landscape mulch, the organic quality of landscaped bed soils is improved, adding beneficial microbes while controlling artillery fungus and other bothersome fungi.

Q: Can I still use additional fertilizer on my plants and shrubs?

A: Always seek the advice of your landscape professional since soils, mulch, plant material, and currently used applications must be considered.

Q. Has anybody done a sizeable installation?

A. Gloria Day, owner operator of Pretty Dirty Ladies, Inc Garden and Landscape Design & Maintenance, recently applied a 40% compost/mulch blend at a residential site in West Chester PA. The residence has been plagued with the artillery fungus, and was treated with 6 cu yards of the blend.



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