



ADDITIVES FOR SEPTIC SYSTEMS or "Flushing Money Down the Toilet"

A septic tank, to many homeowners, is an adult version of the bogeyman. It's lurking out there somewhere in the backyard, ready to attack and cause unspeakable financial torment.

Some homeowners, in an effort to avoid such an attack turn to additives, regularly feeding their septic tanks everything from yeast to commercially available enzymes and bacteria, to acids and bases, to even a pound of hamburger.

The sub-title says it all: additives sold to improve the operation of septic systems are a waste of money. If a septic system is properly designed, installed, and maintained it will operate correctly just by being used. If the system is not properly designed, installed or maintained, no additive will resolve the problem.

What is an additive?

For regulatory purposes in Washington, an additive is a commercial product which claims to improve

the performance or aesthetics of a septic system. Regulations do not cover the yeast, dead chicken, hamburger or other home remedies folks use. But, like the commercial products, the home remedies are ineffective.

Commercial additives are marketed at retail stores, and through tele-market, mail order and door-to-door sales, and by plumbers and septic system pumpers. Advertising for these products may claim that the additives counteract the adverse effect of household products such as bleach, detergent, and other compounds, that they increase soil percolation, clear pipes, reduce odors and reduce the need for pumping.

What does research reveal about additives?

In 1993, the state legislature initiated research that found most additives did not have a positive effect. In fact, the research revealed that additives can lead to

contamination of groundwater and may make drainfields dysfunctional and result in costly repairs to homeowners. Research results have been similar in other studies.

How are additives regulated in Washington?

As the result of the research, legislation was passed to help protect the consumer. The new laws established a review of additive products. It prohibited the use, sale or distribution of additives which the review determined would adversely effect public health or water quality.

The laws DO NOT certify that the products reviewed are effective, it does not endorse the products or recommend their use. As long as a product does not harm the environment or human health, it can be sold, distributed and used...even if it doesn't perform to advertised claims.

The state law says that the advertising cannot say that the product was

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approved by the State or that the additive eliminates the need for tank pumping or proper maintenance.

Do additives really work?

The state gave additive manufacturers the opportunity to provide technical data from controlled studies to prove positive effect of the product...**BUT NONE WAS PROVIDED.**

Analysis of the products reveals the following:

- If the product is a liquid, 15 to 99.9 percent of the product is water. More than half of the products are primarily water with "spores."
- If the product is a solid, it is usually more than 90 percent cereal grain such as rice hulls, corn-cob, bran, etc. Several are predominantly bran with "spores" sprayed on the grain.
- Other solid ingredients included baking powder, heat-dried sewage sludge, chalk, brewers yeast, soda ash, table salt, baking soda, industrial cleaners, Epson salts, sodium sulfate, and enzymes.
- Other liquid ingredients included industrial cleaners, cottonseed oils, biocide, vitamin supplements, opacifier, triethanolamine, sodium benzoate, calcium stearate, coloring and fragrance.

- When inspecting the fine print, the "enzymes" actually aren't in the product but are expected to be produced by microbes.
- The bacteria which are most frequently used are common throughout the soil environment. Any vegetative growth potential through the product's bacteria are usually limited by the product's biocide, preservative, or acidic nature.
- The advertised number of bacteria in products were less than the number of bacteria in the wastes from a household with 2.5 occupants.

Are there any possible positive effects from using additives?

Baking soda and baking powder can benefit the process of decomposition. But few additives contain either ingredient, or if they do, the amount is insufficient to influence the process.

Industrial cleaners improve the contact between the soil substrate and microbes in the soil to treat grease. Unfortunately, septic tanks do not have the agitation necessary to mix the cleaner with the scum, so the cleaner serves no purpose. Cleaners carried in most household waste water normally establish all the contact needed.

When bacteria "die-off" upsets happen (such as introduction of a caustic acid, some medicines, or

large amounts of some chemicals), some products may reduce the recovery time—which is typically from 30 to 60 hours—by an hour or so. This insignificant recovery improvement does not warrant regular use of additives for an incident that rarely occurs.

So, what's the bottom line?

Additives sold in Washington retail outlets and most common household remedies will not hurt your septic system, but **THEY WON'T HELP IT EITHER.** Consumers have the right to purchase them if they choose.

Consumers should also be aware that some out-of-state companies using mail-order to telemarketing practices, may be unaware of—or ignoring—Washington State laws. Some products available through them may harm your system or make illegal advertising claims. If you suspect that a product you are offered may be illegal, you can check with the County Environmental Health Division (417-2332) to see if the product has passed the state review. Any product illegally advertised should be reported to the Washington State Department of Health's Office of Community Health Programs (360-586-8133).

This fact sheet is adapted for use in Clallam County from information provided by Tom Long, Washington State Department of Health. Copies of this fact sheet are available from the Clallam County Extension Office, (360) 417-2281.

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