Septic Tank Additives

How does my septic system work?

Household wastewater flows into the septic tank, where it is collected and stored. The solids—mostly food waste—sink to the bottom of the tank, where they are degraded by bacteria. The liquid portion of the wastewater then flows into a series of drain basins, where it is further treated by bacteria and other microorganisms.

Is there research on septic system additives?

Over the past 40 years, there have been several studies conducted on septic tank additives; however, there is still some debate on their effectiveness. Part of the problem stems from the number of additives on the market today, many of which contain enzymes that can be purchased through septic tank pumps, discount stores, and chemical companies.

Chemical additives, such as caustic hydroxides and sulfuric acid, should never be added to a septic tank. Adding these products will destroy the bacterial population in the septic tank, change the chemistry of the soil absorption system, and may cause ground-water contamination. Chemical additives should never be added to a septic tank.

Benefits may ultimately be identified. Based on available literature, enzymatic products might have the ability to reduce the amount of oil and grease in the septic tank. Second, under septic tank "die-off" conditions, slight reductions in the amount of effluent solids have been achieved by using additives.

A research study by Mark Gross, Ph.D., has shown that septic tank "die-off" conditions occur when the bacteria in a septic tank are destroyed due to the presence of toxic substances. Die-off conditions were observed when adding a concentration of 2.8 gals of liquid bleach, 2.0 gals of liquid soap, or 1.1 gals of organic material to a standard 1,000-gallon septic tank. Other factors that can cause die-off include the use of enzymatic agents, and in certain cases, medications taken by the homeowner.

If you have a question, call (800) 624-8301 or (304) 253-4191.