

Home & Environment

Turfgrass Color: Indicator of Septic System Performance

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Introduction

Many homeowners notice color differences in the turfgrass over their septic system absorption fields. Most often, homeowners observe green stripes or brown turfgrass relative to the surrounding lawn. This is worth keeping an eye on because turfgrass color is often an early sign that serious problems are about to occur.

Brown Turf Over the Trenches

In warmer months or during dry periods, grass over absorption field trenches can turn brown and appear burned (Figure 1). This is due to the lack of water holding capacity in soil above the absorption field trenches. (Indiana requires a minimum of 12 inches of soil over the gravel trenches.) Only about 25% of this soil volume is water, which turfgrass can quickly deplete during dry summer months.

Brown grass over the septic system is merely an aesthetic problem. No action is required by the homeowner. Your septic system is probably functioning as designed. The problem is transient and your lawn should recover fully in September. You should not water your lawn above the absorption trenches because the additional water can reduce the effectiveness of the absorption field and may eventually lead to field failure.

Green Grass Over the Trenches

When a septic system soil absorption field overloads hydraulically, the trenches are filled with wastewater. Hydraulic overloading occurs when the soil surrounding the trenches cannot absorb and disperse high wastewater flows produced by the home. When the soil cannot absorb and disperse all the wastewater, the trench fills like a bathtub. The nutrient-rich wastewater moves through the soil pores above the trenches to the surface, resulting in lush green grass over the absorption field. In dry months, the green stripes over the trenches offer a stark contrast to the grass between the trenches (Figure 2).



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Figure 1. Brown turfgrass over soil absorption field trenches indicates an absorption field that is probably functioning as designed.



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Figure 2. Unusually green turfgrass stripes represent a stressed septic system that is failing or likely to fail during wetter months or when the system receives high wastewater flows. This could be a maintenance problem.

Soil Absorption Field Maintenance

To properly maintain your septic system's soil absorption fields:

- Avoid vehicular traffic and construction activities above the absorption field area (rule of thumb: Nothing larger than a riding lawn mower should be on top of your soil absorption field).
- Divert run-off water from your lawn, roof, and basement drains away from the soil absorption field.
- Do not plant trees or shrubs in or adjacent to the soil absorption field

For additional septic system maintenance tips see Purdue Extension publication HENV-2, *Increasing the Life of Your Septic System*: <http://www.ces.purdue.edu/extmedia/HENV/HEN-2-W.pdf>

Soil Absorption Field Trench

Figure 3 shows a cross section of a soil absorption field trench that is 2 feet deep and 1½ to 3 feet wide. A foot of gravel surrounds a perforated pipe at the bottom of the trench. A geotextile fabric is placed on top of the gravel to prevent soil from filling in the spaces between the stone aggregates. The remainder of the trench is filled with soil to the original surface grade.

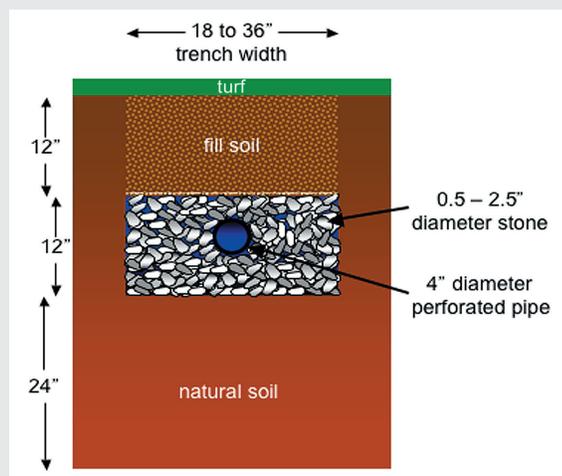


Figure 3.

If you have properly maintained your septic system over its lifetime and you observe green stripes over the soil absorption field, decrease the load on the system by:

1. Installing aerators on faucets and shower heads to decrease flow,
2. Replacing older appliances such as toilets, clothes washers, and dishwashers with newer, water-saving units,
3. Reducing lengthy showers,
4. Washing your clothes at a Laundromat, or
5. Decreasing the number of clothes washing cycles.

If you decrease water use, but turfgrass stripes persist for a few months, contact your county health department for additional advice. These health professionals will have a list of septic system professionals in your area who can assist in troubleshooting your problem. Possible solutions include adjusting flows in your septic system distribution box or adding additional trenches to an undersized septic system.

Remember: A properly functioning septic system relies on the soil's ability to absorb wastewater. A septic system owner's primary responsibility is to protect human health and the environment. Modifying the system to be aesthetically pleasing is secondary.

For additional information visit the Purdue Residential Onsite Wastewater Disposal Web site: <http://www.ces.purdue.edu/onsite>.

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