



Current Report

Cooperative Extension Service • Division of Agricultural Sciences and Natural Resources
Oklahoma State University

Controlling Tree Roots in Sewer Lines with Copper Sulfate

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If flow through the sewer has stopped, call a plumber. If it's just sluggish, you can restore the flow and prevent future stoppage by using copper sulfate.

Copper sulfate will kill not only roots growing in the sewer line but also the organisms which produce offensive odors. Copper sulfate will require several days to several weeks to work, although spectacular results are sometimes obtained when a rapid breakdown of the organisms within the root mass is achieved and flow is quickly restored.

Tree roots in contact with or immersed in copper sulfate solution absorb copper for a short distance into the root system. Use of this treatment has yet to cause the loss of a tree or shrub. Apparently the absorptive function of the roots is destroyed before toxic copper travels very far. This results in only local killing action. There is no leaf discoloration when used as follows. In fact, copper-lined containers are routinely used for growing tree seedlings.

Pour copper sulfate crystals of medium size into the commode or toilet stool in small amounts, about 1/2 cup at a time, followed by successive flushing of water until the crystals are carried outside the dwelling into the sewer line. Under NO circumstances should copper sulfate crystals be placed in sink or tub traps where they will erode the light-weight metal pipes and cause leaks. It would be wise to leave the house for the day after treatment.

Much smaller amounts of copper sulfate could be used two or three times a year to prevent stoppage where root invasion problems are frequent.

A similar treatment applies to homes with a septic tank and absorption field.

Copper sulfate has been added to septic tanks in tests without harming the bacterial action in the tanks. Two (2) pounds of copper sulfate is recommended for a three-hundred (300) gallon tank. This can be repeated at least twice a year, if necessary. Some of the copper sulfate added through the toilet bowl should reach the lateral lines in the absorption field. However, much of the copper sulfate will settle with the solids in the septic tank.

A better treatment of the lateral lines can be accomplished if copper sulfate is added to the distribution box where the lateral lines are connected to the septic tank. Some systems do not have this facility.

Avoid contaminating drinking water of animals, especially sheep, with copper sulfate.

To be most effective, copper sulfate should be added to the sewer at the first indication of root entrance into the system whether your house plumbing is connected to a sewer line or a septic tank. A small amount added each day for a two-week period would probably be more effective than a large amount all at once.

Copper sulfate can be obtained from drug stores or garden centers.

Always read and reread all the labels before application. The applicator is liable for any harm to the environment.

The information given herein is for educational purposes only. References made to commercial products or trade names are with the understanding that no discrimination is intended and no endorsement is implied.

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The Cooperative Extension Service is the largest, most successful informal educational organization in the world. It is a nationwide system funded and guided by a partnership of federal, state and local governments that delivers information to help people help themselves through the land-grant university system.

Extension carries out programs in the broad categories of agriculture, natural resources and environment; home economics; 4-H and other youth; and community resource development. Extension staff members live and work among the people they serve to help stimulate and educate Americans to plan ahead and cope with their problems.

Some characteristics of the Cooperative Extension system are:

- The federal, state and local governments cooperatively share in its financial support and program direction.
- It is administered by the land-grant university as designated by the state legislature through an Extension director.
- Extension programs are nonpolitical, objective and based on factual information.
- It provides practical, problem-oriented education for people of all ages. It is designated to take the knowledge of the university to those persons who do not or cannot participate in the formal classroom instruction of the university.
- It utilizes research from university, government and other sources to help people make their own decisions.
- More than a million volunteers help multiply the impact of the Extension professional staff.
- It dispenses no funds to the public.
- It is not a regulatory agency, but it does inform people of regulations and of their options in meeting them.
- Local programs are developed and carried out in full recognition of national problems and goals.
- The Extension staff educates people through personal contacts, meetings, demonstrations and the mass media.
- Extension has the built-in flexibility to adjust its programs and subject matter to meet new needs. Activities shift from year to year as citizen groups and Extension workers close to the problems advise changes.