

ASK THE EXPERT

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Determining tree health and stability

Problem: One of our clients has a large, 3½ ft. dbh oak tree in their yard close to a swimming pool. This tree has a basal root rot and the tree is leaning towards the pool slightly. Is there some way to find out how strong the tree is, and whether or not it can be saved?

Another tree in the neighborhood died last year, possibly due to a similar problem. (Ohio)

Solution: Several disease-causing agents can cause root rot and make trees unstable. Depending upon the health of your trees, this could be a potentially hazardous tree and may be a liability problem.

To determine the tree's health, contact a certified arborist with experience in dealing with hazardous tree evaluations. The extended type of root rot and/or possible internal decay/cavity need to be examined before providing any preservation treatments.

After the evaluation, if the tree has good supporting tissues, then consider providing cultural treatments, including proper fertilizing, mulching, aerating and selective pruning to help improve the plant's health.

If the crown is very heavy, selective pruning should help air movement and reduce the risk from storm damage.

In general, root rot diseases are difficult to manage. If the disease is caused by fungi like *Phytophthora sp.*, Subdue or Aliette fungicide treatments might be beneficial. If the root rot disease is caused by *Armillaria sp.*, the causal agent of shoestring root rot, no known fungicidal treatments will manage this. General recommendations include removing the soil from the base of the tree and root flare, and opening the affected area to allow it to air dry. This will help the tree produce wood tissue faster. Before winter, put the soil back on the root flare to protect it from low temperature injury.

For all practical purposes, in my opinion the tree should be considered unstable if there is any basal rot or decay. If it is a potential liability issue, then removing the tree might be a good idea.

Are pesticides weakened by high pH?

Problem: We understand that certain pesticides can break down rapidly if the pH of the water in the mixture is above 7.0. Is the insecticide Sevin subject to this problem? If so, what effect will it have on pest management results? Also how long can a treatment mixture be retained and used? Sometimes, due to rain or other problems, we may not be able to use pre-mixed solutions. (New York)

Solution: Many pesticides are sensitive to degradation by the chemical reaction—alkaline hydrolysis—when mixed with water containing a high pH. This reaction and degradation is commonly experienced with carbamates or organophosphates. With some exceptions, the degradation process is generally faster with carbamate pesticides like Sevin than with organophosphate pesticides such as Dursban.

Since you are concerned with Sevin insecticide, the following

information should help you better understand the problem. Laboratory studies with Sevin brand carbaryl showed the following rates of degradation based on half-life of carbaryl under different pH ranges.

Spray pH	Carbaryl half-life
3.0	Stable
5.0	Stable
6.0	Stable at 25° C; 29 days at 35° C
7.0	10.5 days at 20° C
8.0	1.3 days
9.0	2.5 hours
10.0	15 minutes

In reviewing the above information, it appears that, for optimum treatment results, it is better to have a pH maintained closer to neutral or lower. As you can see, even at pH 8.0 the material's half-life would be 1.3 days, which means it should be good for part of the following day if you mixed the previous day. However, if you can maintain the pH of 7 (neutral) the shelf life can be extended to 10.5 days at 20° C.

A Rhone-Poulenc company representative says that the more dilute the spray solution and/or the higher the temperature of the spray mix, the greater and more rapid are the effects of pH.

Read and follow label specifications for better results.

Dylox not labeled for chinch bugs

Problem: Can we use Dylox granular insecticide to manage a chinch bug problem in lawns? (Pennsylvania)

Solution: The Dylox 6.2 granular insecticide label does not include chinch bug. Although those who have used Dylox for grub control feel that it gives some level of control of chinch bugs also. However, Dursban has been known to better manage chinch bugs. I suggest using other insecticides since Dylox is not labeled for chinch bugs.

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Mail questions to "Ask the Expert," LANDSCAPE MANAGEMENT, 7500 Old Oak Blvd., Cleveland, OH 44130. Please allow two to three months for an answer to appear in the magazine.