

# VEGETATION MANAGEMENT

By Roger Funk, Ph.D., Davey Tree Expert Co., Kent, Ohio

## Crabgrass Problems

Due to the number of questions relating to lack of crabgrass control with pre-emergent herbicides last year, I compiled the data from our lawn care division and other contributing lawn care companies in the Midwest and Northeast. Many reasons were proposed as the cause of what many people felt was the worst infestation of crabgrass within a decade. Among the suggestions were unusual earthworm activity that disrupted the herbicide barrier, early crabgrass germination even though spring was delayed (an 18-day delay according to our phenological data), developing herbicide resistance, and late germinating crabgrass.

In our own tests and those of other researchers experimenting with pre-emergent herbicides, I could find no evidence of increased herbicide tolerance by crabgrass seedlings.

Unusual earthworm activity may be a reasonable explanation in localized areas, but it is doubtful if it could explain the widespread incidence of crabgrass reported to me last year.

If the environment were the primary causal factor, there should be some consistency relating the time of application with the degree of control. The percentage of lawns reportedly with unsatisfactory crabgrass control was more or less constant throughout an application period from March 24 to May 10.

In short, I could not find sufficient evidence to support any of the suggestions as the probable cause of an increased incidence of crabgrass. It is quite possible that other companies will find — as we did — that when all of the data is accumulated and analyzed, the crabgrass infestation was not nearly as severe as earlier suspected.

**Q:** *To what extent has used crankcase oil been utilized to sterilize soil under gravel beds (in lieu of utilizing plastic — fiberglass mats — herbicides) — are there any known problems?*

**A:** If you are referring to the use of crankcase oil for weed control in landscape plantings, we have not attempted this and could find no references. I would suspect that if the oil is concentrated enough to control weeds, it would also cause injury to ornamentals, particularly those that are shallow rooted.

If you are referring to oil in gravel beds without ornamentals, it should be successful. Crankcase oil has been used in gravel driveways for total plant control.

**Q:** *I have a tree plantation of 3-8' pine and spruce trees. Brush (poplar, willow, etc.) has grown to the same height among these trees. Can you recommend a selective herbicide that will kill the brush but not harm the pine and spruce trees?*

**A:** Esteron 245, a formulation of 2,4,5-T, is labeled

for the control of hardwood species in forest conifers, including pines, at a recommended rate of two quarts of Esteron 245 in 10 to 15 gallons of water per acre. Apply during the summer after the conifers cease spring growth and have "hardened off." You may want to test a small area as the application rate is critical and rates higher than two quarts/acre may cause conifer injury.

2,4,5-T formulations cannot be used around the home, recreation areas or similar sites. Read the label and consult your extension agent for recommendations to fit local conditions.

**Q:** *Bagworms went on the rampage in certain regions last year, devouring acres of greenery. What are the chemicals that will effectively control this pest?*

**A:** One of the most effective ways to control bagworms on small shrubs is to clip off the bags from infested plants during the winter. Chemical control is most effective in the spring or early summer before the larvae become too large. There are many effective chemicals, including carbaryl, diazinon, acephate or *Bacillus thuringiensis*, which provides a biological control.

**Q:** *I recently heard of a number of trees dying on a golf course built over an old land fill and understand that it is gas that is killing them. Is research relative to this subject being conducted currently?*

**A:** Dr. Franklin B. Flower, extension specialist in Environmental Science at Rutgers University, New Jersey, has been investigating species best suited for planting on land fills. He and his colleagues have travelled extensively in order to assist others in making on-site evaluation of the potential for gas vegetation growth problem on land fills. They have research plots on land fills and the data obtained will eventually show the best planting techniques to use.

**Q:** *After reading the article (October 1978) on fertilizing trees, I wonder what liquid N-P-K and/or micronutrient fertilizer solutions are available. I use a high pressure piston 10-gpm, 110-gallon tank sprayer for spraying trees and lawns. I also use an injector probe made from 1/2-inch steel electrical pipe to inject fertilizer into the soil. What fertilizers are available to avoid minimal wear on my sprayer?*

**A:** Liquid, soluble fertilizers cause less abrasive injury than liquid suspension fertilizers to pumps and spray equipment, which is your primary concern. However, suspension fertilizers are less corrosive to metals, have a lower "burn" potential on plant roots and have a longer residual in the soil.

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There are a number of soluble N-P-K formulations on the market including Prolawn, Sta-Green and Rapid-Gro. Most of the soluble fertilizers are formulated from the same nutrient sources and, therefore, give similar results when applied at the same rate. You should price the fertilizers and compare the cost per nutrient pound.

Micronutrients are available in the chelated form as Sequestrene and as soluble salts such as ferric nitrate and magnesium sulfate.

**Q:** What is the composition of Wilt-Pruf? Can this product serve as winter guard?

**A:** Wilt-Pruf NCF is a low molecular weight, Lewis acid catalyzed polymer of beta-pinene. It is chemically di-l-p-Methene.

Wilt-Pruf reduces tissue desiccation and is labeled for winter protection.

**Q:** I need the name and vendor of a product that will help to eliminate Christmas tree poaching. I understand that such a spray is available that will not harm trees but will give off an offensive odor when the tree is placed indoors.

**A:** You are probably referring to the deer repellent which gives off an offensive odor at room temperature. Such a product was used by the Somerset County Parks Commission in New Jersey this past winter. Contact Jack Moody, secretary-director of the commission, for evaluation of the product. **WTT**

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Classes are limited to just 24 students on a first-come, first-served basis, so we urge you to act today. For complete information, please contact:

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