VEGETATION MANAGEMENT

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

Q: *Can sprayers be cleaned out after they have been used to apply Silvex?*

A: We have not had good success in decontaminating large sprayers after the use of phenoxy herbicides.

Our standard procedure is to clean the sprayer with ammonia and then test clean water which has been pumped through the sprayer on tomato or bean plants. If no distortion occurs, the cleaning operation was successful. The process may have to be repeated several times. In the case of older equipment with pitted or rough internal surfaces, decontamination may not be practical.

The decontamination process is outlined below:

(1) Use one gallon of household ammonia per 10 gallons of water. Pump a small amount of ammonia solution through the system and let stand overnight. If applicable, disassemble nozzles and soak the caps, screws, etc., in the ammonia solution.

(2) Drain the material and flush the system twice with clean water.

(3) Circulate the third rinse water through the system and allow to stand overnight.

(4) Collect a sample which has been pumped through the system and spray onto the indicator plants.

Q: *We have a tree-lined lane on campus that gets a lot of student traffic. The grass is nearly bare, and* some of the trees are beginning to die back. We *are considering resodding the area when school is not in session this summer, but what can we do for the trees?*

A: Soil compaction from foot traffic can be a very serious problem for both trees and turf. Compaction restricts water and oxygen penetration, resulting in poor root growth and often death of existing roots. Aerators are commonly used on athletic fields and occasionally on home lawns to relieve compaction. The most effective turf aerators remove finger-sized cores of soil to a depth of three to four inches. The root zone of the trees can be aerated by drilling holes to a depth of about 18 inches on a spacing of one and a half to two feet.

You may want to consider wood or bark chips instead of turf, if applicable in your situation. Both wood chips and shredded bark have been used successfully to "cushion" foot traffic along wooded trails to protect the adjacent trees.

Q: *What changes can be expected in soil pH if a sulfur-coated slow-release fertilizer is used?*

A: The conversion of sulfur to sulfate will make the soil more acidic. The increase in acidity will be determined primarily by the amount of fertilizer applied and the oil texture.

If you are concerned that the sulfur coating will have an adverse effect by increasing the acidity, I would not expect this to be a major problem. The acidifying effect from other nitrogen sources has been easily corrected.

If you are expecting the sulfur coating to correct undesirable alkalinity, I doubt if sufficient sulfur will be applied. Sulfur-coated urea (36-0-0) has a sulfur content of about 12%. If, in a single season, you apply four pounds nitrogen per 1000 square feet, you will also apply 2.4 pounds of sulfur to the same area.

As a general rule, 20 pounds of sulfur per 1000 square feet is required to decrease the pH of soil solution by one unit. In practice, the pH of clay soils is difficult to lower, particularly if the soil is inherently calcareous.

Q: *Last year our oak trees were covered with galls. Are these caused by a disease or insect, and how do I get rid of them?*

A: Galls can be caused by insects, mites, nematodes or fungi. Since you indicated that your oaks were "covered with galls," you are probably referring to leaf and/or twig galls.

Oaks are infested with over 800 insect galls, most of which are caused by wasps. These galls rarely affect the health of the trees, but control may be warranted for aesthetics. Unfortunately, the life histories of the majority of these insects have not been determined, so the timings for control have yet to be established. On a trial basis, you could spray the tree with insecticide at budbreak and again seven to 10 days later.

Q: *One of my clients had a 4-inch tree which broke near the ground. The break was clean and looked almost like a joint. Could it have broken apart where it was grafted?*

A: Yes. Some graft incompatibilities may not become evident until the tree has grown a number of years.

It is also possible that wire or nylon cord used to secure the ball wrapping to the trunk was not removed or cut at the time of planting and subsequently girdled the tree.

Q: *The last few years we have used quite a lot of salts on our driveways during the winter and many of the shrubs along the road are beginning to die back. Could you recommend some shrubs and ground covers that are salt tolerant?*

A: I have completed the following list from a number of articles on the effect of deicing salts on plants. Of course, there are many other factors you should also consider when selecting plants for use in the landscape.

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Salt Tolerance* of Shrubs and Ground Covers

Tolerant
Pfitzer Juniper
(Juniperus chinensis var. pfitzeriana)

Tatarian Honeysuckle
Lonicera tatarica)
Amur privet
(Ligustrum amurense)

Japanese honeysuckle
(Lonicera japonica)

Firethorn
(Pyracantha coccinea)

Black currant
(Ribes nigrum)

Weigela
(Weigela sp.)

Sensitive
Japanese barberry
(Berberis thunbergi)

Boxwood
(Buxus sempervirens)

Squawbush
(Rhus trilobata)

Buffaloberry
(Shepherdia argentea)

Tamarisk
(Tamarix pentandra)

Yucca or Adams needle
(Yucca filamentosa)

Arborvitaes
(Thuja species)

Bayberry
(Myrica pensylvanica)

Virginia creeper
(Parthenocissus quinquefolia)

Boston Ivy
(Parthenocissus tricuspidata)

Autumn olive
(Elaeagnus umbellata)

Rugosa rose
(Rosa rugosa)

Intermediate

'Spring glory' forsythia
(Forsythia intermedia)

Andorra juniper
(Juniperus horizontalis)

Winged euonymus
(Euonymus alatus)

Multiflora rose
(Rosa multiflora)

Arctic blue willow
(Salix purpurea var. nana)

Viburnums
(Viburnum species)

(*Soil salts; not necessarily)
(true for salts on foliage.)