

VEGETATION MANAGEMENT

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Q. I raise Christmas trees, and my biggest problem is transplant survival. Can you recommend something that will cut my losses? (Pennsylvania)

A. Transplanted seedlings frequently die during the first year because of poor water relations. Roots may dry-out before the stock is planted. Insufficient rainfall and/or poor root development after planting also result in transplant mortality. Watering helps transplanted ornamentals become established but may not be practical or economical on a large scale basis such as a tree farm.

Survival would be greater if we could insure an adequate water supply during the first season. Perhaps science has come to the rescue in this regard. Miller Chemical and Fertilizer Corporation is marketing a new product under the trade name LIQUA-GEL, which is chemically related to the starch graft polymers invented by the USDA. When added to water, the material forms a thin slurry. LIQUA-GEL should absorb 800-1000 times its weight in water. The gel-like slurry clings tenaciously to roots.

The performance of slurry-dipped Christmas tree planting stock was evaluated in Michigan, Pennsylvania and Wisconsin. The reports were encouraging. Ohio State University reports that transplant survival was dramatically increased and early growth was improved.

Apparently, the gel-like coating protects the roots from dehydration while out of the ground and provides water to the transplant for nearly a year. Water absorbed and stored by the material is released to the plant as needed. Water given to the plant is replaced as the material absorbs moisture from the surrounding soil. We have not tested LIQUA-GEL, but if it performs as well as information indicates, it would solve a common problem in the tree-growing industry.

Q. A client has inquired about an adverse effect of cultivating around shrubs. I have been in landscape and maintenance business many years and feel that this practice to control weeds and feed the plants is not harmful.

A. I believe there is a misconception concerning keeping shrubbery borders of foundation plantings weed-free by cultivation. For best results, use an organic mulch to keep the area weed-free and to provide other mulching benefits, such as moisture retention. With the use of mulch, cultivation around plantings is generally not necessary, is of no advantage, and may result in root injury.

Surface roots of many ornamental plants can be severely injured, even by careful cultivation practice. Most active roots are located near the surface within the dripline of the plants. It is not even necessary to cultivate once or twice a year to incorporate dry fertilizer, since the material can be penetrated by watering or rain.

Q. Can you recommend a chemical which could be used effectively against road salt injury to home lawns? Some of our lawn care clients are interested in such a treatment. (Minnesota)

A. Chemical control of road salt accumulation in a lawn is very difficult. Gypsum is a possibility but often

not practical because it takes up to 200 lbs. per 1000 square feet of lawn. Gypsum replaces harmful sodium with calcium and improves soil structure. For best results gypsum treatment should be done very soon after the salt application. Best solution is heavy watering and leaching the salt. Often Mother Nature can help in this situation with good rains; if not, do consider heavy watering.

Q. Dogwoods are a favorite flowering tree of many species and colors. The main problem has been borers. Why do the same trees get borers year after year while others are never bothered? (Virginia)

A. The dogwood borer was discussed at the recent International Society of Arboriculture Meeting.

Exposure, wounds, crown dieback, blossom color and tree size were studied. Reports indicate that dogwoods in full sun are three times more likely to be attacked by borers than trees in full shade; wounded trees are twice as susceptible to borers as trees without wounds; trees with crown dieback are more susceptible to borers than healthy trees; and dogwoods with pink flowers were more heavily infested. No clear-cut relationship was found between tree size and degree of borer attack; however, young trees were most often infested near the ground.

Cultural practices which reduce borer problems are: avoid pruning just prior to and during adult flight, remove badly infested trees, maintain tree vigor with water and fertilizer, wrap trunks of newly planted trees and brace.

Q. We have used Trimec in our lawn care programs for a number of years. In recent years, many organic-minded persons are concerned about the 2,4-D contamination and its effect on human and other environment. Please update us on present status of the issue. (New Jersey)

A. Your question is a hot and timely issue because of widespread, adverse publicity. Reports from a leading toxicologist at a recent international meeting indicate that exhaustive studies show that 2,4-D does not remain in the body, even at very high doses, does not accumulate in body fat or tissue and is excreted from the body in the urine. Studies have shown that the maximum amount of 2,4-D absorbed by applicators using backpack sprayers is about 1/1000 of the 'no-observable-effect' level, or the point where some effect might be expected, although this kind of equipment causes the highest occupational exposure.

No scientific evidence exists to support charges that regular use of herbicides causes birth defects. Epidemiological studies of human populations have failed to show any impact of herbicides on human health.

Much of the present fear of pesticides, including weed killers like 2,4-D, is attributed to the lack of exposure of the public to the true facts.

Send questions or comments to: Vegetation Management c/o WEEDS TREES & TURF, 7500 Old Oak Blvd., Middleburg Heights, OH 44130. Allow at least two months for Roger Funk's response in this column.