

Protection from the Unpredictable

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THE DEATH of a prized tree, regardless of its dollar value, is undoubtedly a great disappointment to the landowner who paid for it, the landscape architect who recommended it and the arborist who planted and cared for it. A tree that initially cost \$100 to plant may easily cost \$150 to replace. However, the application of \$1 worth of an anti-desiccant might well have saved the tree and spared the inconvenience of transplanting.

Paul Kramer is quoted from *Plant and Soil Water Relationships* as saying "more plants are injured or killed as a result of transpiration exceeding water absorption than by any other cause." There are few arborists who disagree.

The skills involved in digging a tree and preparing a proper planting site can be controlled. The procedures for proper post-planting care can also be practiced. The one unknown factor dictating the

survival or death of the \$100 tree is the weather which prevails in the weeks following transplanting.

A transplanted tree is separated from 75 to 95 percent of its original water-gathering root system when dug. It is essential that it reproduce new root hairs rapidly to replace this loss. Regrowth of new roots may require only days or a few weeks. But dry weather during this critical period can produce severe water stress known as "transplanting shock" which can wilt or kill the plant. On the other hand, there may be little or no transplanting shock if the subsequent weather is wet and humid.

Since weather is unpredictable, an insurance against possible adverse growing weather is desirable to both save an investment and assure customer satisfaction. This is the justification for an anti-desiccant.

The life supporting water for a plant is extracted from the soil by

very fine root hairs tightly attached to individual soil particles. It is moved upward through conductive tubes in the stem to the leaves. During this passage, water constitutes the primary medium for all the complex chemical processes required to convert simple elements to complex organic plant foods, and it distributes these foods to their proper locations in the plant. Among other functions, water is also credited with the task of keeping plants cool.

Considering the importance of water to the health and wellbeing of a plant, a surprisingly small fraction of the total water intake is essential to maintain life. Perhaps not more than five percent is incorporated into plant tissue. Nevertheless, the plant water supply must continually be replaced, or existing water must be conserved by reducing transpiration loss to an acceptable level.

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Wilt-Pruf NCF provides an organic film that reduces transpiration in recent transplants and also serves as a protectant for established plants against drying winter winds. The foliage should be sprayed until thoroughly wetted to the point of run-off.

PROTECTION (from page 12)

The new WILT-PRUF NCF anti-desiccant acts as a conservation agent. It does not completely stop water discharge but it reduces water loss to an acceptable balance with water intake. The daily requirement of water differs with different plants and, furthermore, it is not uncommon to observe that the same variety of plant exhibits different water requirements in different climatic areas.

Adequate plant protection and insurance against adverse weather is generally obtained with a dilution of ten parts water to one part concentrate. However, this dilution can be varied within limit ranging from five to 20 parts of water to one part WILT-PRUF NCF. Because it is non-toxic to plants, the dilution rates can safely be varied to fit local conditions and needs. Assistance in determining proper dosage can be obtained from the use manual supplied upon request by the manufacturer, Nursery Specialty Products, Inc.

The new product is most economically applied to trees and shrubs with a low pressure spray. The sprayer can be of any sort ranging from a mist blower to a standard spray rig. Since the product is

easily washed from sprayers, it is no longer necessary to quickly wash them out after use. High pressure application is not recommended because of resulting waste.

Field experience has demonstrated that about 80 percent coverage is as efficient as 100 percent coverage, but care should be exercised to assure coverage of the terminal portions of plants where "soft" or new growth is usually present.

Bare root trees and seedling transplants are generally coated most economically by dipping them in diluted material. Concrete drainage tile cemented into a tube is excellent for dipping bare root trees and cut Christmas trees.

WILT-PRUF NCF is a unique arborist's tool because of its four-season utility. During spring, summer and autumn it serves as plant transplanting insurance. In winter it serves as a plant protectant against drying winds and ocean coast salt sprays. This use of WILT-PRUF may well become as important as its use in transplanting. Homeowners and estate gardeners do not like the inconvenience of spraying anything in winter. Herein lies a great business opportunity for customer spraying.

Some arborists have capitalized on this situation and set up a winter protection spray service. Its reception was excellent and served a number of worthwhile objectives. First, it provided winter work for crews which were normally discharged for the season. Second, it created a new image for the arborist company as a company interested in the year-round health of their customers' landscape plantings. Third, it provided a sense of comfort for the owners of landscape programs. Finally, this service provided an additional opportunity for contact with the customer.

The new NCF differs from its predecessor, WILT-PRUF, and other anti-desiccants in that it is easy to handle in winter, is not toxic to plants or animals, is cheaper to use, leaves no unsightly coating, resists removal by water, is easy and safe to apply, permits free exchange of carbon dioxide and oxygen and exhibits only slight reduction of photosynthesis. Basically, it is an ecologically safe protection against excessive and harmful water loss.



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