tissue closed most implantation holes within 1 year.

Complaints from nurserymen, arborists, and homeowners concerning the lack of consistent success in correcting iron chlorosis in trees prompted further work by Schoeneweiss (4) and Neely (3) at the Illinois Natural History Survey and Smith (5) at Ohio State University.

Recommendations

Soil treatment.—Excellent results without foliar burn have been obtained with feEDDHA at a rate equivalent to 10 pounds of Sequestrene 138Fe per 200 gallons of water per 1000 square feet of soil. This should be considered the maximum rate for highly alkaline soil, and a lower dosage may be sufficient in soils which are neutral or slightly alkaline. The material is injected into soil to a depth of 12-15 inches with a root needle and hydraulic pump or hydraulic sprayer operating at 150-200 psi pressure. Injection sites are placed at intervals of 2½ feet in a series of parallel lines 2½ feet apart throughout the area to be treated. There should be approximately 160 injection sites in each 1000 square feet. Each injection site should receive 1.2 gallons of water. Treat all the soil beneath the branch spread of the chlorotic tree. Best results are obtained from April, May, or June treatments. Treatments remain effective 2, 3, or more years.

Trunk implantation (for pin oaks only.)—Treat trees with gelatin capsules containing ferric citrate or ferric ammonium citrate in April, May, or June. Trees may be treated while still dormant or after leaves appear. The dosage is based on tree size, as is given in this table.

Trunk (dbh) *(in.)*	Capsule size *(filled w/iron salts)*	Distance between holes *(circumference in.)*
1-4	No. 2	2
4-12	No. 000	3
12 and up	1/8 oz.	4

Implantation holes are placed in the trunk at different heights (1-3 feet above the soil) around the entire circumference. Hole size and depth must be sufficient to place the iron-containing capsule entirely in the wood of the trunk (not in the bank). Properly installed MEDICAPS (which contain iron citrate salts) will seal the implantation holes. Otherwise close the holes with doweling discs, corks, grafting wax or asphalt to prevent sap leakage. Water the trees thoroughly immediately after treatment and during dry periods in the summer.

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ABSTRACT

Tinus, R.W. 1975. **Growth retardants control development of deciduous nursery stock.** Tree Planters' Notes 26(1):5-7.

Many nurseries growing deciduous tree seedlings find that their stock reaches the desired size at mid-growing season. It would be valuable to have a means to prevent it from growing larger. Unsold stock that grows an additional full season may become so large that it must be destroyed. In this study two growth retardants were tested for nursery use to control size of five hardwood species. Alar slowed growth of lilac and cotoneaster. Slo Gro stopped growth of Siberian elm, and slowed growth of honeysuckle and cotoneaster. Chemicals were less effective than undercutting on green ash.