



Early testing of Medicaps was done in 1969. Tree at time of treatment showed mild iron chlorosis. Today it is a thriving specimen.



Tree, used as control in '69 test with tree in above picture, also exhibited mild iron chlorosis. It died in 1970.

## New and on the Market

# SYSTEMIC TREATMENT VIA TRUNK INJECTION

A new systemic system for treating trees via trunk injection is now on the market. Treatment, at the moment, is limited primarily to use of iron for chlorosis.

The patented system consists of a series of capsules being injected or planted in the tree trunk. Implants are known as "Medicaps" and are placed directly into the cambium layer in the area of active sap flow. Creative Sales, Inc., Fremont, Neb., manufacturer and sales outlet for the process states that use of the capsules is both easy and effective and speeds the use of pre-measured materials into the tree system.

Normally, a 3" to 5" tree will require three Medicaps, placed around the trunk at about 5-inch intervals. Each additional inch of tree diameter will require another Medicap, are then driven into the pre-drilled holes. Each Medicap is 1½-inch long, permitting the capsule to be driven exactly ⅛-inch beyond the surface of the cambium layer. Treatment, according to Wolfe, requires only minutes per tree, using a standard drill and half-inch bit. And, he states, it should be good for 2 to 5 years unless the chlorotic condition is extremely serious in which case re-treatment earlier may be necessary.

Wolfe points to the Medicap technique as simply a plastic cartridge that serves as a container for a premeasured volume of chemical. It serves as its own applicator, has its own antirejection barbs, and provides its own cork to seal the application site. The Medicap is tapered, to allow for easy insertion into the predrilled hole, has four slots on the sides which allow for

release of the contents at a regulated rate. Slots, Wolfe reports, are lined according to Warren D. Wolfe, president of the corporation. Holes, one-half inch in diameter and 1¼ inches deep, are drilled into the tree trunk. The plastic, bullet-shaped Medicaps with a soluble sealant. This sealant retains the contents until contacted by tree sap at which time they are released into the sap stream.

Larger trees are easy to treat with new Super Medicaps. These have over double the iron content of those capsules first introduced. Wolfe also reports a new Mini-Cap is being introduced this season, which is ideal for plantings below 3" in caliper (i.e. field nursery plantings and highway or roadside plantings).

Wolfe, backed by a number of university research projects, believes that there is a great efficiency in trunk injection of iron. Iron compounds, he states, applied to the soil must be used at rates of 2½-4 pounds of product per inch of trunk diameter. With Medicap injection, using the concentrated form of iron, the rate may be as low as two grams or less.

Wolfe also reports that use of iron via the trunk implant system is only the beginning for the systemic method. Tests and research are underway with a number of promising systemic insecticides and fungicides, he continues, and there is reason to believe efficiency will be as great as that with iron. Tests to be made with different sized capsules will allow for rate studies, and possible use of combination ingredients.

A roundup of ornamental tree



Tools for the job consist of small hammer and portable drill and bit. Bulk pack of 100 iron Medicaps will treat 20 average trees, according to Warren D. Wolfe, Creative Sales, Inc.



Jim Elliott, left, production manager for Plumfield Nurseries, Fremont, Neb., and Warren D. Wolfe, president of Creative Sales, Inc., use new Mini-Caps for nursery trees down to 1-inch in size.

problems on which Wolfe reports research is underway or planned includes: (1) Dutch elm disease with systemic insecticides for possible control of the elm bark beetle; and systemic fungicides aimed at controlling the disease; (2) anthracnose which is an increasing disease problem in many sycamore trees; (3) mimosa webworm, a continuing problem; (4) bronze birch borer and other borers for which no acceptable control is currently available; (5) the pine tip moth and elm leaf beetle for which some systemic insecticides appear very promising; and (6) gypsy moth control.

Creative Sales, Inc., believes popularity to date for their new system stems from the fact that it avoids the common public resistance to sprays and dusts, and requires little time and equipment for a serviceman to handle a client problem. The system is also adaptable for the homeowner do-it-yourselfer, according to Wolfe.

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