

**J.J. MAUGET CO.**  
**MICRO-INJECTION**  
**PRODUCT CATALOG**

## INTRODUCTION

MAUGET micro-injection products are the choice of more green industry professionals than any other method of tree injection. For more than 30 years, MAUGET products have been professionally used to assist with improving tree health while protecting the environment.

MAUGET micro-injection technology has proven to be the most efficient and effective utilization of a tree's transpiration system for transporting nutrients and pesticides. MAUGET products are easy to apply and "SIMPLY EFFECTIVE".

MAUGET offers the broadest line of micro-injection products available in one system and has been referred to as "A DRUG STORE FOR TREES". MAUGET brings the most versatile of the micro-injection systems available to the Green Industry Professional. The MAUGET product line includes: fertilizers, micro-nutrients, insecticides, fungicides, antibiotics, combination products and training/support materials. MAUGET offers a comprehensive support system through its toll free technical support line (877-TREE HLP 877-873-3457), international network of distributors and research associates.

## FERTILIZERS

MAUGET has the greatest assortment of agricultural minerals developed specifically for micro-injection treatments. Some of the unique advantages would include; root system damage, feeder roots not accessible, ground water concerns, leaching/drainage concerns, rapid availability of elements, frost damage protection and recovery, insect damage recovery. 100% of the elements are utilized by the plant resulting in a cost effective fertilization program.

The STEMIX family of fertilizers are based on chelated elements. Depending on soil conditions, the benefits of these micro-injection treatments can be evident over one to five years when compared to adjacent untreated trees.

**STEMIX:** 0.7-1-0.9 is an all purpose balanced fertilizer that contains a formula of agricultural minerals designed to stimulate foliar and root growth without extended damage to trees. It is particularly effective in promoting new foliar, cambial and root growth where conventional applications of fertilizers alone may not produce this effect. Stemix treatments will provide the stimulation necessary for the proper acceptance of soil applied fertilization materials.

**STEMIX HI VOLUME:** 0.47-0.68-0.61 is basically the same formulation as stemix only diluted from 4 ml. to 6 ml. with 2 additional mls. of water. This formulation provides improved distribution throughout the tree.

**STEMIX ZINC:** is based on the stemix hi vol formulation with enhanced levels of zinc, for the treatment of zinc deficiencies in many species of trees. Zinc deficiencies associated with calcareous soils are fairly common in numerous fruit, nut and ornamental trees; particularly conifers, pecan, walnut and oaks. Symptoms are usually displayed by a "little leaf" condition, loss of deep green color and in severe situations by a rosetting of the terminal leaves.

**STEMIX IRON/ZINC:** 0.5-0.9-0.6 is based on the stemix hi vol formulation with enhanced levels of iron and zinc. Iron deficiencies associated with high acid/calcareous soils are fairly common in citrus, walnut, avocado, peach, nectarine, conifers and certain shade trees. Symptoms are usually displayed by leaves having darker green veins with a yellowing or loss of color between veins (generally, young leaves are primarily affected).

## MICRO-NUTRIENTS

The INJECT-A-MIN family of micro-nutrients are based on sulfated elements. These products are beneficial in areas where soil conditions are more alkaline. Depending on soil conditions, the affects of these treatments are usually evident over one to five years when compared to adjacent untreated trees.

**INJECT-A-MIN IRON/ZINC:** 0.6-0.0-0.8 agricultural mineral injectors contain iron and zinc sulfates which are quite effective in rapidly overcoming iron and zinc deficiencies in pin oaks and many other species of trees growing in non-native alkaline soils. Symptoms are usually displayed by leaves having darker green veins with a yellowing or loss of color between veins (young leaves are generally affected).

**INJECT-A-MIN MANGANESE:** 0.7-0.0-0.85 agricultural mineral injectors contain manganese sulfate which is quite effective in rapidly overcoming manganese deficiencies in palms, maples, citrus and many other species of trees. Symptoms are usually displayed by leaves having darker green veins with a yellowing or loss of color between veins (generally, young leaves are affected).

## INSECTICIDES

**MAUGET** has developed the broadest line of insecticides for micro-injection treatments. The most efficient and environmentally responsible way to apply pesticides. No need to worry about drift, because of "**MAUGET'S closed system**" this means the chemical is contained entirely within the tree. Only pests feeding on the plants living tissue are directly affected by the chemicals. Beneficial and non target insects and other life forms sharing the environment are not impacted. This provides the applicator with opportunities to treat trees in adverse weather conditions (wind, and rain) or at locations such as; near swimming pools, water ways, in school yards, along busy streets, in interior plantscapes etc.

From the fast acting, to the long lasting, **MAUGET** has the solution for your clients trees insect problems.

**ABACIDE** (contains Abamectin 1%): replaces Inject-a-cide av and has an improved formulation improving uptake in Conifers. It is for use by commercial arborists (applicators) on ornamental trees for control of spider mites, leaf miners, elm leaf beetle, sycamore lace bug and fall webworm. It can be applied in commercial or residential landscapes, interior plantscapes and other areas where ornamental trees and woody shrubs are grown. **ABACIDE** contains a warning label and provides long residual with very fast uptake.

**IMICIDE** (contains Imidacloprid 10%, the active in MERIT®): is available in 3 dosages, 2ml., 3ml., & 4ml. It is for use on plants grown in interior plantscapes, ornamental gardens, parks, golf courses, residential lawns or grounds. Recommended target insects on ornamental trees include; Adelgids, Aphids, Elm leaf beetle, Bronze birch borer, Japanese beetle, Lacebugs, Leafhoppers, Leafminers, Mealybugs, Pine tip moth larvae, Scale insects, Thrips and Whiteflies. **IMICIDE** carries a caution label and provides very long residual (full season plus), preventive applications and broad spectrum control. **IMICIDE** will start controlling infestations within 1-7 days following application.

**INJECT-A-CIDE B** (contains Bidrin 82%): is for use by certified commercial arborists and pesticide applicators with restricted materials licensing on ornamental trees. Available in 1ml., 2ml. and 3ml. dosages. **INJECT-A-CIDE B** is effective against such insect pests as; Aphids, Leafhopper, Bronze birch borer, Gypsy moth, Birch leafminer, Eastern tent caterpillar, Dogwood twig borer, Scale, Elm leaf beetle, Psyllid, Sycamore borer, European pine sawfly, Pine spittlebug, Spider mites, etc. Broad spectrum, restricted use, extremely fast action and uptake. **INJECT-A-CIDE B** carries a class B poison label.

**INJECT-A-CIDE** (contains Metasystox-R 50%): is for use by certified commercial arborists and pesticide applicators on ornamental trees. Is effective in controlling a large variety of Bark beetles and Engraver beetles in conifers when in active larval stage. **INJECT-A-CIDE** provides a broad spectrum of applications, is restricted use and carries a danger label.

## FUNGICIDES

**FUNGISOL** (contains Debacarb 2.0%): is specifically for micro-injection treatment of over 30 common pathogenic diseases including; Oak wilt, dutch elm disease, Fusarium wilt, Anthracnose, Nectria canker, Verticillium wilt, Coryneum blight, Diplodia tip blight, Phomopsis canker, Elm wilt, Cytospora canker, Pink bud rot in palms, Melanconium, etc.. A unique feature of **FUNGISOL** is its ability to translocate to the root zone (phloem mobile), to fight persistent soil born pathogens. This product carries a caution label.

**CARBOJECT** (contains Oxycarboxin 2.0%): is for the systemic aid in the suppression of certain fungal diseases of ornamental and crop trees (ash and oak Anthracnose, sycamore Anthracnose, Verticillium wilt and V. albo-atrum in camphor, catalpa and maple, Pine pitch girdle, etc.). This product carries a caution label.

**TEBUJECT** (contains Tebuconazole 4%): a phloem mobile Triazole fungicide developed to control Crabapple scab, Oak wilt, Dutch elm disease and Hawthorn leaf spot. This product carries a caution label.

## ANTIBIOTICS

**MYCOJECT** (contains Oxytetracycline 4.22%): is a systemic aid in the suppression of certain bacterial diseases of ornamental trees. It's uses include Ash yellows, Bacterial leaf scorch in elm and red oak, Phloem necrosis in elm, Palm lethal yellows, Peach x disease, Fire blight in pear, Bunch disease in pecan (non bearing) and Leaf scald in plum (non bearing). This product carries a caution label.

## COMBINATIONS

**ABASOL** (contains Debacarb 2.0% plus Abamectin 0.48%): is one of several new products where **MAUGET** has combined multiple pesticides to provide disease suppression along with insect control. This product provides both fungicide & insecticide and is very cost effective. With a broad label of 30 pathogens and a wide variety of insects this combination is in a class by itself. This product carries a warning label.

**IMISOL** (contains Debacarb 2.0% plus Imidacloprid 5%): The second product combining insecticide and a fungicide, similar in use to Abasol except where the insecticide of choice would be **IMICIDE**. This product carries a caution label and is available in 3 dosages (4, 6 & 8ml).

## OTHER PRODUCTS

### FEEDER TUBES:

Four different size feeder tubes are available to accommodate the variety of bark thicknesses. The 7/64" (2.8mm) mini-micro feeder tube provides the smallest wound in the industry and is recommended for use in trees with bark thickness less than 1/2" (12.70mm). Three lengths of standard 11/64" (4.4mm) feeder tubes: 1 3/4" (4.5cm) for trees with bark thickness under 3/4" (9.5mm), 2 3/4" (7cm) standard feeder tube packed with product, 4 1/2" (11cm) feeder tubes for trees with bark thickness in excess of 2" (5.1cm).

### INSERTION DEVICE:

Used with the mini-micro feeder tube 7/64" (2.8mm), enables the tube to be set in the very small drill hole without tissue plugging and interfering with uptake.

### MAUGET DIAGNOSTIC FIELD MANUAL :

A must have resource tool for the professional. Provides information on over 60 diseases and insects with color illustrations of life cycle and timing information charts. An excellent tool to explain specific situations to your clients.

### APPLICATOR MANUAL:

This resource provides technology background, product information, marketing support and application variables to support the applicator during his developmental period with micro-injection technology.

### HOME STUDY COURSE:

This training program includes 4 video tapes and the applicators manual with certification test. It is designed to bring the applicator to a level of knowledge whereby he may confidently start to apply this technology in the field. Required state certification along with MAUGET certification allow him to purchase MAUGET products.

## DIRECTIONS

### SIX EASY STEPS to apply the MAUGET MICRO-INJECTION PRODUCTS

**STEP ONE.** To determine the number of capsules to be used, measure the trees diameter in inches at breast height and divide by two ( If in centimeters, divide by 5.1) or the circumference in inches and divide by six (If in centimeters divide by 15.).



**STEP TWO.** Drill an 11/64" (4.4mm) diameter hole at the base of the tree, through the bark 1/4-3/8-inch (6.4- 9.5mm) into the trees xylem or sapwood.



**STEP THREE.** Place feeder tube into the opening of the pressurized capsule then promptly place the unit into the predrilled hole.



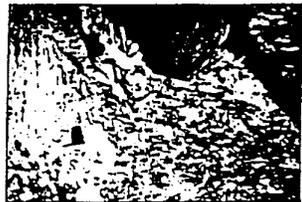
**STEP FOUR.** Tap the base of the capsule opposite the feeder tube with a small mallet to rupture the inner seal of the capsule. This allows the chemical to enter the tree.



**STEP FIVE.** The predetermined number of capsules from step one, are placed on the root collar, (usually about 4 inches (10.4cm) above ground level.



**STEP SIX.** When the capsules have drained, turn them over for a minute and carefully remove them with the feeder tubes.



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