

## Insecticide Imicide® and Imicide® Hp



**Imicide®**, containing imidacloprid in a completely enclosed micro-infusion system, has been used by the USDA and state governments in prevention and eradication programs for Asian and Citrus Longhorned Beetles, with over 500,000 trees successfully protected. Since 2000, the USDA lists Imicide as the only trunk injection product in their APHIS Emergency and Domestic Program for control of the Asian Longhorned Beetle. Research shows that Imicide is one of the most effective preventative and control treatments for the Emerald Ash Borer. Also available is **Imicide Hp** in high volume, one-liter bottles for liquid loadable injectors.

- Exceptionally long residual
- Second season protection
- Preventative treatment
- Broad spectrum
- University and USDA tested
- Completely enclosed, minimal risk application method
- Starts controlling infestation as soon as one to seven days following application
- *CAUTION* label

**Active Ingredient** Imidacloprid 10%  
EPA Reg. No. 7946-16, 7946-25





# Insecticide Imicide® and Imicide® Hp

## Target Insects

Adelgids  
Aphids  
Asian Cycad Scale  
Black Vine Weevil Larvae  
Bronze Birch Borer  
Cottonwood Longhorned Borer  
Douglas Fir Gall Midge  
Douglas Fir Cone Moth Larvae  
Elm Leaf Beetle

Emerald Ash Borer  
Eucalyptus Longhorned Borer  
Eucalyptus Redgum Lerp Psyllid  
Flathead Borers  
Gall Wasps  
Japanese Beetle  
Lacebugs  
Leafhoppers  
Leafminers

Mealybugs  
Pine Tip Moth Larvae  
Psyllids  
Red Palm Mite  
Royal Palm Bugs  
Scale Insects  
Thrips  
Whiteflies

## Research

Insect / Issue	Researcher Facility	Findings
Asian Longhorned Beetle	USDA Illinois, New York	Less than 1% of over 70,000 treated trees became infected.
Asian Cycad Scale	Terry Tattar University of Massachusetts	Reduced scale population after 30 days, with 75% suppression after 60 days. <i>17th Annual USDA Invasive Species Symposium &amp; Forum, January 2006.</i>
Douglas Fir Cone Gall Midge	David Overhulser Oregon Department of Forestry	Significantly reduced galls per scale, increased extractable seed, increased filled seed, and reduced <i>Dioryctria</i> infested cones. <i>Evaluation of Trunk Injected Imidacloprid for Control of the Douglas Fir Cone Gall Midge, 2002.</i>
Emerald Ash Borer	Deborah McCullough Michigan State University and USDA	Higher amounts of imidacloprid in tree canopy than Wedgler product. Reduced in larvae. <a href="http://www.emeraldashborer.info">www.emeraldashborer.info</a> . <i>Summary of Research Conducted in 2003.</i>
Emerald Ash Borer	Deborah McCullough Michigan State University and USDA	Lower number of adults and larvae in second year. Less dieback between first and second year. <a href="http://www.emeraldashborer.info">www.emeraldashborer.info</a> . <i>Evaluation of Insecticides for Control of Emerald Ash Borer: Summary of 2004 Trials.</i>
Gall Wasp	Arnold Hara University of Hawaii	Significantly reduced emerged wasps from 1 through 4 months after treatment.
Hemlock Woolly Adelgid Effect on biological controls	Brian Eisenback Virginia Tech	Significantly decreased shoots infested by 28%. Reduced adelgid populations to under 10% infestation. Biological control agents (beetles) were not significantly affected, with 80-86% survival.
Hemlock Woolly Adelgid	Tom McAvoy Virginia Tech	Four years of trials. Significantly reduced adelgid density 66%. More effective than soil injection at 35%.
Redgum Lerp Psyllid	Lester Young Cal-Poly University	Significantly reduced nymphs for up to 8 months. <i>Journal of Arboriculture 28 (3): May 2002.</i>

J.J. Mauget Co.  
5435 Peck Rd  
Arcadia, CA 91006  
800-TREES Rx (800-873-3779)  
[www.mauget.com](http://www.mauget.com)

## Packaging

**Imicide:** 2, 3 or 4 ml capsules, 24 capsules per carton  
4 ml capsules, 98 capsules per package (special order only)

**Imicide Hp:** 500 ml or 1 L bottles

## Insecticide

## Abacide™ 2



**Abacide™ 2** is a more concentrated abamectin insecticide for use on forest, woodland, Christmas and ornamental trees. Contained within a totally enclosed micro-infusion system, Abacide 2 can be applied in commercial or residential landscapes, interior and exterior plantscapes, and other areas including near swimming pools, waterways, schools and busy streets. Spring or summer applications are recommended, and can be made prior to pest appearance or after they are observed. A single application typically lasts one growing season, but severe pest pressure may require two applications in a year.

- Long residual
- Very fast uptake
- Completely enclosed, minimal risk application method
- **WARNING** label

**Active Ingredient** Abamectin B<sub>1</sub> 1.9%  
EPA Reg. No. 7946-27





# Insecticide Abacide™ 2

## Target Insects

Aphids  
Eastern Tent Caterpillar  
Elm Leaf Beetle  
Fall Web Worm  
Leaf Miners  
Lepidoptera Insects

Pine Nematode  
Spider Mites  
Sycamore Lace Bug  
Thrips  
Whiteflies

## Research

Insect / Issue	Researcher Facility	Findings
Eastern Tent Caterpillar	Daniel Potter University of Kentucky	Gave 100% control.
Eastern Tent Caterpillar	Terry Tattar University of Massachusetts	Most effective treatment with 0-10% defoliation of exposed trees by the insect. Untreated trees had 75-100% defoliation.
Uptake of various volumes of insecticide	Terry Tattar University of Massachusetts	Uptake in various formulations and volumes was rapid, even in live oak, a species with a vascular anatomy similar to black cherry. Higher volumes did not present any uptake problems.

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## Packaging

2, 3 or 4 ml capsules, 24 capsules per carton

## Insecticide Inject-A-Cide B<sup>®</sup>



**Inject-A-Cide B<sup>®</sup>**, containing the restricted use Bidrin in a completely enclosed micro-infusion system, provides an extremely rapid uptake of the insecticide into and throughout the tree, and has an immediate effect on insects. Applicators have observed that certain leaf-chewing insects begin to fall off the tree even before the micro-injection is complete. Inject-A-Cide B is registered for control of the Emerald Ash Borer, as well as many other insects.

- Extremely fast uptake
- Very rapid effect
- Broad spectrum
- University and field tested
- Completely enclosed, minimal risk application method
- Restricted use
- *CLASS B POISON* label

**Active Ingredient Bidrin<sup>®</sup> (dicotophos) 82%**  
EPA Reg. No. 7946-11

Bidrin is a registered trademark of AMVAC Chemical Corp.





# Insecticide Inject-A-Cide B<sup>®</sup>

## Target Insects

Aphids  
 Birch Leaf Miner  
 Bronze Birch Borer  
 California Oakworm  
 California Tent Caterpillar  
 Dogwood Twig Borer  
 Eastern Tent Caterpillar  
 Elm Leaf Beetle

Emerald Ash Borer  
 European Elm Scale  
 European Pine Sawfly  
 Gouty Gall Wasp  
 Gypsy Moth  
 Hackberry Psyllid  
 Leafhopper  
 Lesser Peachtree Borer

Nipple Gall Psyllid  
 Oak Gall Wasp  
 Obscure Scale  
 Pine Spittlebug  
 Pit-making Scale  
 Spider Mites  
 Sycamore Borer

*This product is not registered in California.*

## Research

Insect	Researcher Facility	Findings
Aphids, Bronze Birch Borer, California Tent Caterpillar, Elm Bark Beetles, Gouty Oak Gall, Gypsy Moth, Lesser Peach Borer, Oak Pit Scale, Others	W.D. Thomas, Jr. Field Trials	Tested on 1,429 trees in 216 trials over a period of 6 years. Most effective in hardwood species.
Bronze Birch Borer	David Shetlar Field Trials	Effective control of feeding larvae.
Bronze Birch Borer	D.G. Nielson The Ohio State University	Significantly reduced larvae infestation (up to 100% control). No leaf phytotoxicity.
Eastern Tent Caterpillar	Daniel Potter University of Kentucky	Gave 99% control of young larvae in small nests. On more advanced stage larvae, was effective after just 4 days, reducing live larvae per tent by 91%.
Eastern Tent Caterpillar	Daniel Potter University of Kentucky	Killed 87% of the sampled nests outright, and those still active after 10 days had few survivors, resulting in 98% control. Gave 100% control within sampled nests regardless of treatment timing.
Emerald Ash Borer	Deborah McCullough Michigan State University and USDA	Highly effective control of adults (up to 100%) for more than 4 weeks after injection. Effective control of larvae. Performed better than Wedgley Pointer. <a href="http://www.emeraldashborer.info">www.emeraldashborer.info</a> . Summary of Research Conducted in 2003.
Emerald Ash Borer	Deborah McCullough Michigan State University and USDA	Reduced density of larvae. <a href="http://www.emeraldashborer.info">www.emeraldashborer.info</a> . Evaluation of Insecticides for Control of Emerald Ash Borer: Summary of 2004 Trials.
Southern Pine Beetle	M. Dalusky	Substantially reduced brood production. Less egg gallery length. Chemical moved readily within the tree, occurring in both xylem and phloem at all heights.
Effect of micro-injections on trees	Dr. Alex Shigo Walter Money Dale Dodds	Over a 14 year period in which an elm received multiple micro-injections, all wounds fully compartmentalized. No decay or chemical phytotoxicity.

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## Packaging

1 or 2 ml capsules, 24 capsules per carton

## Fungicide + Insecticide Imisol™



**Imisol™** is a special formulation of debacarb fungicide plus imidacloprid insecticide in a completely enclosed micro-infusion system for use on ornamental trees. A combination of Mauget's Fungisol® plus Imicide® in one application, Imisol provides disease suppression of over 30 pathogens and control of more than 20 insects.

- Two treatments in one application
- Broad spectrum
- University researched
- Completely enclosed, minimal risk application method
- *CAUTION* label

**Active Ingredients** Debacarb 1.7%,  
Carbendazim 0.3%, Imidacloprid 5.0%  
EPA Reg. No. 7946-21





# Fungicide + Insecticide Imisol™

## Target Diseases

Anthracnose  
 Atropellis Canker  
 Bleeding Canker  
 Botryosphaeria Branch Canker  
 Cedar Branch Canker  
 Ceratocystis Canker  
 Coryneum Blight  
 Cytospora Canker  
 Diplodia Tip Blight  
 Dutch Elm Disease  
 Elm Wilt  
 Fusarium Wilt  
 Kabatina Branch Canker  
 Leptographium Canker  
 Melanconium Dieback  
 Mimosa Wilt  
 Nectria Canker  
 Oak Decline  
 Oak Wilt  
*Penicillium vermoeseni*  
 Phomopsis Canker  
 Pine Pitch Canker  
 Pink Bud Rot  
 Thielaviopsis Decline  
 Verticillium Dieback  
 Verticillium Wilt  
 Others

## Target Insects

Adelgids  
 Alder Birch Borer  
 Aphids  
 Black Vine Weevil Larvae  
 Bronze Birch Borer  
 Cottonwood Longhorned Borer  
 Elm Leaf Beetle  
 Eucalyptus Longhorned Borer  
 Flathead Borers  
 Japanese Beetle  
 Lacebugs  
 Leafhoppers  
 Leafminers  
 Lerp Psyllid  
 Mealybugs  
 Pine Tip Moth Larvae  
 Psyllids  
 Royal Palm Bugs  
 Scale Insects  
 Thrips  
 Whiteflies

## Research

Disease / Issue*	Researcher Facility	Findings
Effect of micro-injections on tree	Dr. Alex Shigo Walter Money Dales Dodds	Over a 14-year period in which an elm received multiple micro-injections, all wounds fully compartmentalized. No decay or chemical phytotoxicity.
Over 40 fungal pathogens	W.D. Thomas, Jr. Field Trials	Tested on 1,733 trees in 156 trials over a period of 6 years. Effective against Dutch elm disease, Fusarium wilt, Verticillium wilt, pine pitch canker, oak decline and others. Two annual applications suppressed Fusarium decline in oak for at least 5 years.
Pine Pitch Canker	W.D. Thomas, Jr. EPA	Suppression at a level of 95% control. Residual effect in twig tips sufficient to potentially suppress twig and branch pathogens. Longer residual in root crown. Chemical moves readily within phloem and xylem.

\*Studies conducted with Fungisol, which contains same concentration of fungicide active ingredient as Imisol.

Insect*	Researcher Facility	Findings
Asian Longhorned Beetle	USDA Illinois, New York	Less than 1% of over 70,000 treated trees became infected.
Asian Cycad Scale	Terry Tattar University of Massachusetts	Reduced scale population after 30 days, with 75% suppression after 60 days. <i>17th Annual USDA Invasive Species Symposium &amp; Forum, January 2006.</i>
Hemlock Woolly Adelgid Effect on biological controls	Brian Eisenback Virginia Tech	Significantly decreased shoots infested by 28%. Reduced adelgid populations to under 10% infestation. Biological control agents (beetles) were not significantly affected, with 80-86% survival.
Hemlock Woolly Adelgid	Tom McAvoy Virginia Tech	Four years of trials. Significantly reduced adelgid density 66%. More effective than soil injection at 35%.
Redgum Lerp Psyllid	Lester Young Cal-Poly University	Significant reduced nymphs for up to 8 months. <i>Journal of Arboriculture 28 (3): May 2002.</i>

\*Studies conducted with Imicide, which contains a higher concentration of insecticide active ingredient than Imisol.

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 www.mauget.com

## Packaging

4 or 6 ml capsules, 24 capsules per carton



## Fungicide + Insecticide **Abasol™**



**Abasol™** is a special formulation of debacarb fungicide plus abamectin insecticide in a completely enclosed micro-infusion system for use on ornamental trees. A combination of Mauget's Fungisol® plus Abacide™ in one application, Abasol provides disease suppression of over 30 pathogens and long-lasting control and suppression of more than 7 insects.

- Two treatments in one application
- Broad spectrum
- University researched
- Completely enclosed, minimal risk application method
- *WARNING* label

**Active Ingredients** Debacarb 1.7%,  
Carbendazim 0.3%, Abamectin B<sub>1</sub> 0.46%  
EPA Reg. No. 7946-20





# Fungicide + Insecticide **Abasol™**

## Target Diseases

Anthracnose  
 Atropellis Canker  
 Bleeding Canker  
 Botryosphaeria Branch Canker  
 Cedar Branch Canker  
 Ceratocystis Canker  
 Coryneum Blight  
 Cytospora Canker  
 Diplodia Tip Blight  
 Dutch Elm Disease  
 Elm Wilt  
 Fusarium Wilt  
 Kabatina Branch Canker  
 Leptographium Canker  
 Melanconium Dieback  
 Mimosa Wilt  
 Nectria Canker  
 Oak Decline

Oak Wilt  
*Penicillium vermoeseni*  
 Phomopsis Canker  
 Pine Pitch Canker  
 Pink Bud Rot  
 Thielaviopsis Decline  
 Verticillium Wilt  
 Others

## Target Insects

Elm Leaf Beetle  
 Fall Web Worm  
 Leaf Miners  
 Lepidoptera Insects  
 Spider Mites  
 Sycamore Lace Bug

## Research

Disease / Issue*	Researcher Facility	Findings
<b>Over 40 fungal pathogens</b>	<b>W.D. Thomas, Jr.</b> Field Trials	Tested on 1,733 trees in 156 trials over a period of six years. Effective against Dutch elm disease, Fusarium wilt, Verticillium wilt, pine pitch canker, oak decline and others. Two annual applications suppressed Fusarium decline in oak for at least 5 years.
<b>Pine Pitch Canker</b>	<b>W.D. Thomas, Jr.</b> EPA	Suppression at a level of 95% control. Residual effect in twig tips sufficient to potentially suppress twig and branch pathogens. Longer residual in root crown. Chemical moves readily within phloem and xylem.
<b>Effect of micro-injections on tree</b>	<b>Dr. Alex Shigo</b> <b>Walter Money</b> <b>Dales Dodds</b>	Over a 14-year period in which an elm received multiple micro-injections, all wounds fully compartmentalized. No decay or chemical phytotoxicity.

\*Studies conducted with Fungisol, which contains same concentration of fungicide active ingredient as Abasol.

Insect	Researcher Facility	Findings
<b>Eastern Tent Caterpillar*</b>	<b>Daniel Potter</b> University of Kentucky	Reduced number of live larvae per tent, resulting in 80% control.
<b>Pine Mite</b>	<b>Andrew Backhaus</b> Phoenix, AZ	Good control. Good preventative and therapeutic control. <i>The Desert Arborist</i> , May 2004.

\*Study conducted with Abacide, which contains insecticide active ingredient in Abasol.

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 800-TREES Rx (800-873-3779)  
 www.mauget.com

## Packaging

4 or 6 ml capsules, 24 capsules per carton

## Fungicide

## Fungisol®



Since 1978, **Fungisol®**, a proprietary fungicide combination in a completely enclosed micro-infusion system, has been shown to be effective against more than 30 diseases on a large variety of ornamental, conifer, palm and other trees. In addition to managing foliar and stem diseases, Fungisol has demonstrated activity on soil borne wilt pathogens not effectively controlled with traditional fungicide drenches.

- Patented formulation
- Broad spectrum
- Effective against soil pathogens
- University and field tested
- Completely enclosed, minimal risk application method
- *CAUTION* label

**Active Ingredient** Debacarb 1.7%  
Carbendazim 0.3%  
EPA Reg. No. 7946-14





# Fungicide Fungisol®

## Target Diseases

Anthracnose  
 Atropellis Canker  
 Bleeding Canker  
 Botryosphaeria Branch Canker  
 Cedar Branch Canker  
 Ceratocystis Canker  
 Coryneum Blight  
 Cytospora Canker  
 Diplodia Tip Blight

Dutch Elm Disease  
 Elm Wilt  
 Fusarium Wilt  
 Kabatina Branch Canker  
 Leptographium Canker  
 Melanconium Dieback  
 Mimosa Wilt  
 Nectria Canker  
 Oak Decline

Oak Wilt  
*Penicillium vermoeseni*  
 Phomopsis Canker  
 Pine Pitch Canker  
 Pink Bud Rot  
 Thielaviopsis Decline  
 Vermicularia Dieback  
 Verticillium Wilt  
 Others

## Research

Disease / Issue	Researcher Facility	Findings
<b>Anthracnose</b>	<b>Terry Tattar</b> University of Massachusetts	Effective control in 3 studies: 1 injection for 1 season, 1 injection for 2 growing seasons, and 2 injections over 2 growing seasons. Trees given second injection showed improved health condition compared to untreated trees at end of next field season and the condition ratings at the beginning of the study.
<b>Pine Pitch Canker</b>	<b>W.D. Thomas, Jr.</b> EPA	Suppression at a level of 95% control. Residual effect in twig tips sufficient to potentially suppress twig and branch pathogens. Longer residual in root crown. Chemical moves readily within phloem and xylem.
<b>Over 40 fungal pathogens</b>	<b>W.D. Thomas, Jr.</b> Field Trials	Tested on 1,733 trees in 156 trials over a period of 6 years. Effective against Dutch elm disease, Fusarium wilt, Verticillium wilt, pine pitch canker, oak decline and others. Two annual applications suppressed Fusarium decline in oak for at least 5 years.
<b>Effect of micro-injections on tree</b>	<b>Dr. Alex Shigo</b> <b>Walter Money</b> <b>Dale Dodds</b>	Over a 14-year period in which an elm received multiple micro-injections, all wounds fully compartmentalized. No decay or chemical phytotoxicity.

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 www.mauget.com

## Packaging

4 or 6 ml capsules, 24 capsules per carton

## Fungicide

## ArborFos™



**ArborFos™**, a 46% phosphite formulation in a completely enclosed micro-infusion system, is a fungicide that inhibits fungal growth through stimulation of the plant's own natural defense systems. Although its mode of action is not completely understood, researchers indicate it may elicit a type of systemic acquired resistance response. While it imparts no actual phosphorous nutrition, trees tend to develop healthier leaves, roots and stems. ArborFos is for use on conifer, ornamental, forest and certain crop trees for diseases such as sudden oak death (*P. ramorum*), and has recently shown excellent results in sycamore anthracnose management programs.

- Completely enclosed, minimal risk application method
- Environmentally friendly
- Exciting new chemistry with developing potential
- University tested
- Excellent compliment to a total plant health care program
- *CAUTION* label

**Active Ingredient** Mono- and di-potassium  
salts of phosphorous acid 45.8%  
EPA Reg. No. 7946-26





# Fungicide

# ArborFos™

### Target Diseases

- Anthracnose
- Apple Scab
- Bacterial Blight
- Bud Fall
- Collar Rot
- Foot Rot
- Nut Fall
- Phytophthora* spp.
- Root Rot

### Research

Disease / Issue	Researcher Facility	Findings
<b>Anthracnose</b>	<b>Terry Tattar</b> University of Massachusetts	Excellent control during a two-year period of high disease pressure. Substantial improvement in foliar disease rating in following year from carryover into second season. Two-season protection from single injection.

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800-TREES Rx (800-873-3779)  
www.mauget.com

### Packaging

7.5 or 10 ml capsules, 24 capsules per carton

## Fungicide

## Tebuject™



**Tebuject™**, containing Tebuconazole, a Triazole fungicide in a completely enclosed micro-infusion system, provides control of diseases in elm, ash, oak, crapapple, hawthorn and other ornamental trees.

- Completely enclosed, minimal risk application method
- *CAUTION* label

**Active Ingredient** Tebuconazole 4%  
EPA Reg. No. 7946-24





# Fungicide Tebuject™

## Target Disease

- Crabapple Scab
- Dutch Elm Disease
- Hawthorn Leaf Spot
- Oak Wilt
- Other Wilt Diseases

## Research

Disease	Researcher Facility	Findings
Anthracnose	<b>Terry Tattar</b> University of Massachusetts	Effective control in 3 studies: 1 injection for 1 season, 1 injection for 2 growing seasons, and 2 injections over 2 growing seasons. Trees given second injection showed improved health condition compared to untreated trees at end of next field season and the condition ratings at the beginning of the study.

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www.mauget.com

## Packaging

4 or 6 ml capsules, 24 capsules per carton



## Antibiotic

## Mycoject™



**Mycoject™**, containing the antibiotic oxytetracycline in a completely enclosed micro-infusion system, is a systemic aid in the suppression of bacterial diseases in elm, red oak, palm, peach, pear, and non-bearing pecan and plum trees.

- University researched
- Completely enclosed, minimal risk application method
- *CAUTION* label

Active Ingredient Oxytetracycline  
Calcium Complex 4.22%  
EPA Reg. No. 7946-18





# Antibiotic Mycoject™

## Target Diseases

Ash Yellows  
Bacterial Leaf Scorch  
Bunch Disease  
Fire Blight

Leaf Scald  
Palm Lethal Yellows  
Phloem Necrosis  
X-Disease

## Research

Disease	Researcher Facility	Findings
Ash Yellows Leaf Scorch	Byeongjin Cha, Terry Tattar University of Massachusetts	No mycoplasma-like organisms detected in twigs or roots of infected trees for 1 month after injection. Significantly less witches' brooming and tufting. Vigor not affected. Injection wounds compartmentalized within 1 year. After 2 years, only small amount of discoloration around wound, and discoloration did not spread deeper into the xylem. <i>Arboricultural Journal 1993, Vol 17, pp 131-143.</i>

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www.mauget.com

## Packaging

6 ml capsules, 24 capsules per carton

## Fertilizer

## Stemix® Plus



**Stemix® Plus** is an optimum formulation of chelated minerals with a very low salt index and elevated magnesium and calcium, designed to stimulate both foliar and root growth. As a completely enclosed micro-infusion system, Stemix Plus is for use in trees where deficiencies cannot be successfully corrected by foliage or soil feeding, and in areas where leaching into ground water is a concern. Because the elements are placed directly into the trees vascular system, the benefits of Stemix Plus can be evident for one to five years compared to adjacent untreated trees.

- Promotes foliar and root growth
- Rapid availability of chelated elements
- Long-lasting effect
- Completely enclosed, minimal risk application method

**Guaranteed Analysis:** Nitrogen (N) 1.21%  
Phosphoric Acid ( $P_2O_5$ ) 0.92%  
Potash ( $K_2O$ ) 1.00%  
Calcium 0.18%  
Copper 0.08%  
Iron 0.27%  
Magnesium 0.09%  
Manganese 0.08%  
Zinc 0.29%





# Fertilizer Stemix® Plus

## Treatment Uses

- Environmental Stresses
- Nutritional Deficiencies
- Root System Damage
- Frost Protection
- Frost Damage Recovery
- Insect Damage Recovery

## Research

Issue	Researcher Facility	Findings
Various insects	W.D. Thomas, Jr. Field Trials	Accelerated recovery of infested tree with simultaneous or successive feeding with insecticide. Increased effectiveness of insecticide. Reduced need for repeat applications.
Effect of micro-injections on tree	Dr. Alex Shigo Walter Money Dale Dodds	Over a 14-year period in which an elm received multiple micro-injections, all wounds fully compartmentalized. No decay or chemical phytotoxicity.
Effect of micro-injections on tree	Virginia	All wounds fully compartmentalized. No decay or chemical phytotoxicity.

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www.mauget.com

## Packaging

6 ml capsules, 24 capsules per carton

## Fertilizer

### Vigor 53<sup>®</sup>



**Vigor 53<sup>®</sup>**, a 25% potassium-buffered phosphorous acid in a completely enclosed micro-infusion system, provides potassium nutrition in addition to phosphite technology. This combination product works well in a total plant health care program that emphasizes natural plant health defense systems. The additional potassium aids in leaf thickening, better stem and root development, and stimulated frost or cold damage recovery. University research has extensively demonstrated the ability of potassium to aid in the recovery of leaf and stem diseases, as well as other stress agents involved in drought avoidance.

- Promotes growth and crop yield
- More mobile form of phosphorous
- Most rapid delivery of systemic phosphorus
- Completely enclosed, minimal risk application method

Guaranteed Analysis: Phosphoric Acid ( $P_2O_5$ ) 28.0%  
Potash ( $K_2O$ ) 25.0%





# Fertilizer Vigor 53<sup>®</sup>

## Treatment Uses

Environmental Stress  
Nutrient Deficiencies  
Crop Yield  
Frost Damage  
Construction Damage  
Drought  
Insect Defoliation

## Research

Issue	Researcher Facility	Findings
Frost damage in Eucalyptus	Field Trials	Dramatic improvement within 30 days, and back to pre-damage visual appearance after 3 months. Untreated tree had visually slower recovery rate. Treated trees exhibited minimal effect from a prolonged frost occurring 3 years later.

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## Packaging

7.5 ml capsules, 24 capsules per carton

## Micronutrient

## Inject-A-Min® Iron-Zinc



**Inject-A-Min®** Iron-Zinc is a micronutrient formulation containing water-soluble iron and zinc sulfates in a completely enclosed micro-infusion system for pin oaks and many other tree species growing in non-native alkaline soils. Because the elements are placed directly into the trees vascular system, the benefits of Inject-A-Min Iron-Zinc can be evident for one to five years compared to adjacent untreated trees. Iron and zinc deficiencies are characterized by young leaves exhibiting darker green veins with a yellowing or loss of color between veins.

- Promotes growth
- Based on sulfated elements
- High levels of iron and zinc
- Long-lasting effect
- Completely enclosed, minimal risk application method

**Guaranteed Analysis:** Nitrogen (N) 1.00%  
Potash (K<sub>2</sub>O) 1.00%  
Sulfur 1.90%  
Copper 0.10%  
Iron 1.44%  
Manganese 0.12%  
Zinc 1.11%





# Micronutrient Inject-A-Min<sup>®</sup> Iron-Zinc

## Treatment Uses

Iron and Zinc Deficiencies  
Nutrient Deficiencies  
Environmental Stress  
Alkaline soils

J.J. Mauget Co.  
5435 Peck Rd  
Arcadia, CA 91006  
800-TREES Rx (800-873-3779)  
[www.mauget.com](http://www.mauget.com)

## Packaging

6 ml capsules, 24 capsules per carton



## Micronutrient

## Inject-A-Min<sup>®</sup> Manganese



**Inject-A-Min<sup>®</sup> Manganese** is a micronutrient formulation containing manganese sulfate in a completely enclosed micro-infusion system for palms, maples, citrus and other tree species growing in alkaline soils. Because the elements are placed directly into the trees vascular system, the benefits of Inject-A-Min Manganese can be evident for one to five years compared to adjacent untreated trees. Manganese deficiency is characterized by young leaves exhibiting darker green veins with a yellowing or loss of color between veins.

- Promotes growth
- Based on sulfated elements
- High level of manganese
- Long-lasting effect
- Completely enclosed, minimal risk application method

**Guaranteed Analysis:** Nitrogen (N) 1.00%  
Potash (K<sub>2</sub>O) 1.00%  
Sulfur 1.90%  
Copper 0.13%  
Iron 1.67%  
Manganese 1.00%  
Magnesium 0.12%  
Zinc 1.54%





# Micronutrient Inject-A-Min<sup>®</sup> Manganese

## Treatment Uses

Manganese Deficiency  
Nutrient Deficiencies  
Environmental Stress  
Alkaline Soils

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