



# Factors Affecting Uptake

Factor	Slower Uptake	Medium Uptake	Faster Uptake
Species/ Vessel Type	Resinous conifers, tracheids (pine, spruce, fir, hemlock)	Diffuse porous xylem (green ash, maple, birch, beech, sycamore)	Ring Porous xylem (oak*, white ash, elm, locust, chestnut)
Tree Health/ Condition	Poor health, advanced infestation/ disease, stressed, poor canopy, full maturity, damaged trunk, poor/damaged roots	Slight decline, low level infection/ infestation, mid-life, good trunk condition, moderate root health	Healthy, no infestation/disease, dense canopy, healthy trunk, strong annual growth, healthy root system
Product Chemistry & Viscosity	Thick viscosity, heavy solute load, large molecule, micro-encapsulate, hi volume (TREE-age, Alamo)	Med. viscosity, low dissolved minerals, smaller molecular weight/size, lower dosage (IMA-jet, MIN-jets)	Viscosity like water, lower dosage, smaller molecule, simple formulation chemistry (ACE-jet, IMA-jet, PHOSPHO-jet)
Environ- mental Conditions	Drought, air temps < 40 or > 85, Soil temps < 42, compacted soil, poor soil, poor drainage	Low soil moisture, moderate air/soil temps, average soil conditions	Good soil moisture, moderate air/soil temperatures, good overall soil conditions
Season	Winter, mid-Summer	Early Summer, Late Fall	Spring, Early Fall
Injection Sites	Poor trunk location, improper Arborplug set, <u>dbh/4</u>	Better site location, proper Arborplug set, <u>dbh/3</u>	Best site location, good Arborplug set, <u>dbh/2</u>