



INSTRUCTIONS FOR USE OF CHEMJET TREE INJECTOR
FOR TREATING PHYTOPHTHORA ROOT ROT/S.O.D.
READ ALL INSTRUCTIONS BEFORE USING!!

WHAT YOU WILL NEED:

1. Eye protection and latex gloves
2. Cordless drill – 18V works best
3. 11/64" drill bit
4. Spray disinfectant- Lysol
5. Phostrol, Garden-Phos or Reliant fungicide
6. Distilled water, preferably
7. Measuring cups and large mixing bowl

PROCEDURE:

Treating for Phytophthora root rot or Phytophthora Ramorum (S.O.D.) requires a Potassium Phosphite fungicide. Measure the tree at breast height, about 4 ½ feet from the ground, to get the circumference. Divide this number by Pi(3.14) to get the diameter. Divide the diameter by 2 to determine how many injections you will need (round down to the nearest number). Mix 5 ml of fungicide with 15 ml of water* multiplied by the number of injectors needed. Load injectors with the mixture.

*Product labels may vary on mixing instructions. The formula I use is based on my experience treating trees.

IMPORTANT: SINCE THE CHEMJETS USE THE TREES NATURAL TRANSPORT SYSTEM, WE RECOMMEND WATERING YOUR TREES, IF POSSIBLE, A NIGHT OR TWO BEFORE TO HELP SPEED UP THE INJECTION PROCESS. In long periods of dry weather, injecting trees may take longer and could cause phytotoxicity in the trees. We like to recommend injecting after a good rain on trees that cannot be watered ahead of time and if they are not in eminent danger. The injection holes are usually only good for about 48 hours and then the vessels in the tree begin to seal from inside. We want to get all the chemical we can get into a tree and watering helps that process.

You are going to drill your holes as low as possible on the tree. If you have flare roots exposed, then inject into them as well. The bark is thinner and there is more xylem tissue to allow for quicker distribution of the chemical into the tree. You want to put an injection site about every 6" around the base of the tree as a rule of thumb, but don't worry if you have to go a little bit wider. The important part is to get the injectors all the way around the tree for even distribution. You want to drill at a 45-degree angle and about 1 to 1 ½" deep in the trunk (you may have to chisel away thick bark) or ¾ to 1" deep in the flare roots. Make sure you see healthy, white tissue come out of the hole. If you get a brown ribbon, that is dead tissue and no good to use. Avoid drilling into valleys or where wood tissue has been damaged.

Holding the Chemjet by the body, insert the nozzle firmly into the hole. The threads on the nozzle are for strengthening the tip and not intended to be used to screw in the injector. While still holding the body, give it a good bump on the end of the handle with your palm. This will help set the injector. Turn the handle a quarter turn to unlock and move on around the tree until you have the correct number of injectors in the tree (you can drill a couple of holes at a time but don't let the bit get too hot). That's it! The rest is up to the tree. Check back in a few hours to see that the plungers are moving down in the body of the Chemjets. If you don't see any movement in some, you can lock the handle and drill another hole to move the injector to. Sometimes you just hit a bad spot on the tree even with healthy tissue.

Here are a few other helpful tips.

1. Inject early, especially when the temperature is going to get above 90. Trees shut the stomates in the leaves when it gets hot and do not do any water transporting until it cools back down. Trees also do this when temps drop below the 50's
2. DO NOT inject trees while they are putting on new leaf. Wait until they have "hardened off". Live oaks, being semi-evergreen, should not be injected from the beginning of March to the beginning of May. Trees cycle at different times, so just look at the leaf to be sure.

3. Make sure your trees have at least 50% or more canopy before deciding to inject. Trees with a lot of canopy loss may not be able to draw up very much if any of the chemical.
4. You can leave the Chemjets in the tree for up to 48 hours but after that you will have to retreat if not all the injections pulled in. Note where the tree did draw up and try around that area.
5. Trees are going to draw up as much chemical as they can handle. Less canopy, less chemical.
6. What to do about the holes after you pull the Chemjets. I recommend using a toilet bowl wax ring that they sell at any hardware store and a grease gun. You can fill an empty tube or just fill the gun if you are going to use it solely for the wax. It needs to be softened up before loading it and once it gets flowing works great to seal the holes. And on those days when it may be too cool for the wax to flow, I just push it into the hole with a finger.
7. Keep a record of your treatment dates. It is important to reevaluate your trees progress over the next 12 months from first injections. It may be necessary to give an additional treatment if the tree is still showing signs of infection.

CLEANING YOUR CHEMJETS:

There are 2 methods to cleaning the Chemjets depending on how many you have.

Method 1: Fill a bowl with hot water and draw up water into the Chemjet but don't lock it. Instead, off to the side release the handle and let the water shoot out. Repeat this step a couple of times and then pull back on the handle to dispel the remaining water until nothing comes out.

Method 2: Soak the Chemjets for about 10 minutes in a bucket of hot water and then stand them on the handle in a separate container with a drain hole and let them dry. I use this method mostly because I have a large quantity to clean at any one time. Once they are dry you can give the handle a few pulls to make sure no water is left in the tip before you load them again.

*You can add a small amount of liquid disinfectant to hot water if your Chemjets have any residue built up.

The gaskets need to be dry to maintain the suction. If they pop off when you are loading then you may have to open the Chemjet up and clean and dry the gasket and reassemble.

If the gaskets are not sliding up and down smoothly then a shot of WD-40 or spray silicone down the back of the body where the handle comes out and pulling up and down on the handle should free it up.

If you ever have any questions or need assistance, don't hesitate to give me a call at 830-282-9724.

Wayne Fisk, Chemjet Instructor and Injection Specialist