

Applying Imidacloprid 2F or 2L (21.4 or 22.6% liquid) by Kioritz Soil Injector

The Kioritz soil injector holds up to 96 ounces of fluid and dispenses 1/6 ounce of fluid with each pump when the calibration ring is set on the red number 5. One gallon of 2F/2L treats an average of 1,208 diameter inches.

Step 1. Judge whether the soil moisture level is moderate to wet or dry to normal. If you're in doubt about soil moisture level, you should default to the "Dry to Normal Soil" instructions when using a Kioritz soil injector.

Step 2. To make a master batch of treatment mixture, follow the proportions of water and ounces of product shown in the Mixing chart below. Put the water and chemical in a mixing container and shake well. **Warm water** works best.

MIXING THE MASTER BATCH		
Amount of Product	Amount of Water for Moderate to Wet Soil	Amount of Water for Dry to Normal Soil
1 fl oz	1.3 fl oz	3.6 fl oz
7 fl oz	9 fl oz	25 fl oz
14 fl oz	18 fl oz	50 fl oz
21 fl oz	27 fl oz	75 fl oz

Step 3. Measure the trunk diameter of the tree at breast height. This is called "inches dbh."

Step 4. Rake back any leaf litter, needle duff or debris from the base of the tree so that bare soil is accessible. At a distance of **no more than 12 inches from the base of the tree**, make one injector hole in the soil for each inch of trunk diameter. The holes should be evenly spaced around the tree and **no deeper than 2-4 inches**.
Note: For trees smaller than 4 inches in diameter, make a **minimum of 4 shallow holes** around the tree.

Step 5. Based on the trunk diameter, pump the injector handle the number of times shown in the Dosing chart below. **Be sure to stay in the same moisture level column as you used for mixing.**

DOSING EACH TREE		
Inches (DBH)	Pumps per Inch DBH for Moderate to Wet Soil	Pumps per Inch DBH for Dry to Normal Soil
1-11	1 pump / hole	2 pumps / hole
12-18	1.5* pumps / hole	3 pumps / hole
19-22	2 pumps / hole	4 pumps / hole
>22 should be treated two years in a row.	3 pumps / hole	6 pumps / hole

* To get the equivalent of 1.5 pumps per hole, do 1 pump in half the holes and 2 pumps in the other half, distributing these two levels evenly around the tree.

Step 6. When you're finished treating each tree, mark it to indicate it's been treated. When finished working, **triple rinse the injector** as described in "Introduction to Treating Hemlocks" and store it upside down.

CALL THE HEMLOCK HELP LINE 706-429-8010 WITH ANY QUESTIONS.

