

# PALM TREE WEEVIL KILLER (PTWK)

### **PROCEDURES**

#### INTRODUCTION

The following instructions are as follows. When done properly, one treatment has been demonstrated to kill the Palm Tree Weevil and Larvae for up to six months.

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# PALM TREE WEEVIL KILLER INJECTION PROCEDURES (1)

Note 1: No protective clothing required. The Palm Tree Weevil Killer is harmless to humans, animals, and the environment.

#### **Recommended Equipment:**

- 1. Milliliter measuring cup
- 2. One 20 liter jerry can with a faucet
- 3. One heavy duty electrical drill
- 4. Long (15 meters) extension cord
- 5. Long ladder (16 m for tall tree; must reach underneath crown of tree or as high as possible)
- 6. Electrical Generator (if there is no source of electricity for the drill)
- 7. One corkscrew wood drill bit 400-450mm long with a 10-12mm diameter size.
- 8. Three Tubes of silicon with a squeezing mechanism
- 9. Four 1 or 1.5 liter bottles
- 10. 2 meters of plastic tubing (used in fish tanks)
- 11. One steel pole (for root treatment)

#### a) Procedure- Drilling:

- 1. Using the drill and 450 mm drill bit, make four equidistant holes at the bottom of each side of the tree, and four equidistant holes at the top of the tree. Make sure that these holes are slightly staggered at different heights, so the tree trunk strength is not weakened or compromised.
- 2. Each hole must be drilled downward at a 30-40 degree angle to the trunk of the tree, with the drill tip does not pass the center of the tree.
- 3. Complete drilling all of the trees that are to be treated at the same time.

#### Note 2:

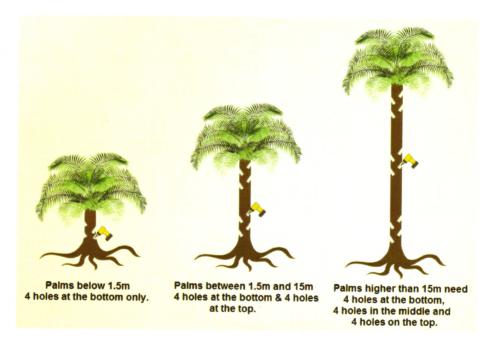
- a) Trees that are below 1.5 meters high only need four holes at the bottom.
- b) Trees that are above 1.5 and below 15 meters high need four holes at the bottom and four holes at the top below the crown.

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- c) Trees that are higher than 15 meters need four holes at the bottom, four holes in the middle, and four holes at the top.
- d) Injection Treatment is more efficient than root treatment for killing the Red Palm Weevil, with 100% of the product going into the tree, and is less expensive.
- e) However Root Treatment will break down salts in the soil, increasing the flow of nutrients to the tree, in addition to killing the Red Palm Weevil.
- f) A combination of both treatments is the best complete solution.



### b) Procedure- Dosing the tree

- 1. Dilute the PTWK with water at a 600:1 ratio; for a 20 liter container, pour 33.33ml of PTWK super concentrate to the container and add 20 liters of water.
- 2. The 20 liters of the final diluted product will be used to treat 2 trees (10 liters per tree, 5 meters +), 5 trees (4 liters per tree for trees between 3 m and 5 m), and 10 trees (below 3 m) with 2 liters of PTWK per tree.

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c) Procedure- Injection of PTWK into the trees.

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- 1) After drilling 450mm channel in tree, insert a length of hose a fingers length (10cm) into hole; seal with silicon.
- 2) Drill a hole in bottle cap that is smaller than the hose. Take the end of the hose inserted in the tree; fold it and insert into the bottle cap hole. Put a bit of silicon around the exterior of the bottle cap hole, and let it dry.
- 3) After one hour: Prepare Palm Tree Weevil Killer and pour into bottle uncapped.
- 4) Use the cap at the end of the hose and screw it tight on to the bottle.
- 5) Turn the bottle upside down; fix it to the tree with a thin wire (chicken wire).
- 6) During the day, the tree will suck the liquid out of the shaft towards the top of the tree (Transpiration); at night the liquid will reverse direction.
- 7) Once the bottles are empty, remove and take to the next tree; repeat the procedure.

## Palm Tree Weevil Killer Root Treatment Procedures (2)

Note 3: Using the root treatment, the Palm Tree Weevil Killer will also increase tree growth and strengthen the tree by breaking down salts in the soil, increasing the nutritional intake of the tree by up to 20%.

### e) Procedure- Root treatment

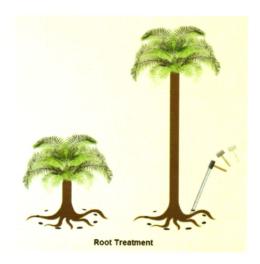
- 1. Using a pointed pole (steel bar) make 5 holes equally spaced in a circle around the tree 30 cm from the trunk, each hole about 7 cm diameter and 50 cm deep.
- 2. Dilute the PTWK with water at 600:1 ratio; for 20 liters, add 33.33ml of PTWK super concentrate to a 20 liter container and add 20 liters of water.
- 3. Pour two liters of the diluted product into each hole; so 10 liters per tree will be needed for the first treatment.

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- 4. For trees over 3 meters, after two weeks (three weeks if the weather is cool), repeat steps 2 and 3.
- 5. Root Treatment requires 10 liters per tree below 3 meters; over 3 meters, use 20 liters.



If the farmer wishes to pour the PTWK around the trunk (without making the 5 holes in a circle around the palm) then it is required to make a circle or basin around the palm tree to concentrate the product around the roots of the tree.

Note 3: Soil with a lot of sand will drain liquid away from the roots, reducing the benefit. The solution is to put smaller quantities of liquid around the tree more frequently. For example, for the prior Root Treatment Instructions (2-e), only put ½ liter of product into the holes instead of 1 liter. Repeat the treatment weekly, with ½ liter per hole. For very sandy soil (sand being 85%+), use Drip Irrigation techniques, to maximize the roots absorption rate of the Palm Tree Weevil Killer.

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Note 4: For very large palm trees (15 meters and higher), 6 liters of the root treatment is recommended (to increase nutritional intake by nano-sizing salts in the soil, as well as to kill the weevils), combined with 4 500ml injections at the middle of the trunk, and 4 500ml injections at the top of tree underneath the crown (total of 10 liters). Repeat treatments after 2 weeks.

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Note: Sandy soil does not hold liquids; therefore smaller quantities of liquid have to be applied to the tree root system over a longer period of time to enable the tree roots to absorb the maximum amount of product. For very sandy soil, drip irrigation is required.

# PALM TREE WEEVIL KILLER TREE SPRAYING PROCEDURES (3)

### f) Procedure- Preparing the spray

- 1. Dilute the PTWK with water at 1200:1 ratio; for a 20 liter container, put 16.67ml of PTWK super concentrate in the container and add 20 liters of water to it.
- 2. Spray the leaves and trunk with the product.

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Note 5: Spray the leaves to quickly suppress infestation at the top of the palm tree, or if the palm tree weevil is seen eating the palm fronds. This is an optional treatment; if the farmer wishes to wait a few days, either the injection treatment or the root treatment is sufficient, as the PTWK will migrate into the palm fronds and leaves.

Note 6: By using either the injection method or the root treatment method, the palm tree weevil killer also cleanses the tree's molecular structure as well, which allows for the faster channeling of fluids through the xylem.

The tree will intake nutrients from the roots more effectively and quickly, as well as spread the natural pesticide through the tree. The effect can be seen by an arching of the tree palm fronds towards the sky at the trunk base (unless they have been pushed down by laborers).

Signature:

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