

# PALM

## INJECTOR KIT

To inject palm trees, the Palm Injector Kit is used with the QUIK-jet® and TREE I.V. and only one injection site is needed.

### PALM INJECTOR KIT CONTAINS

- A (1) Drill Bit 3/16 x 8" Palm Drill
- B PTC 1/4" to 5/32" Reducers
- C 5/32" Tubing
- D STINGER - Palm Needle 8"
- E VIPER Needle and line
- F Palm Injector bag



## DELIVERY SYSTEMS & FORMULATIONS



### QUIK-jet®

Arborjet's revolutionary injection tool is designed for lower dose applications. Complementing the successful TREE I.V., QUIK-jet's speedy delivery is the perfect system for the industry professional and can also be used as a diagnostic tool to assess tree health and uptake.



### TREE I.V.

The most versatile injection system available – effective for all tree types. Its closed system directly infuses pest control, disease control, and nutritional products with reduced environmental exposure. High volume, low pressure, lightweight and easy to use.

# DRILL, PLUG, INJECT

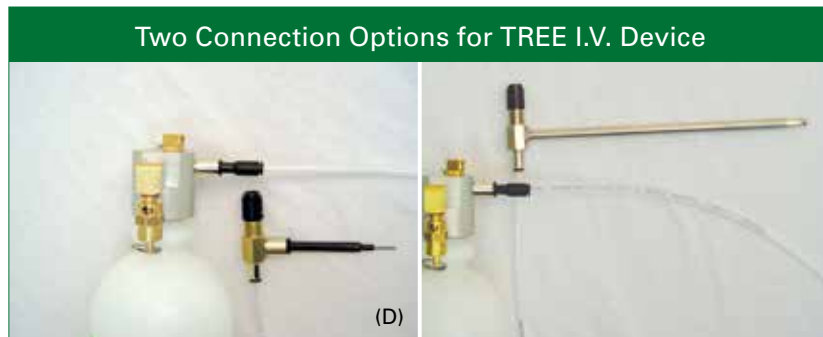
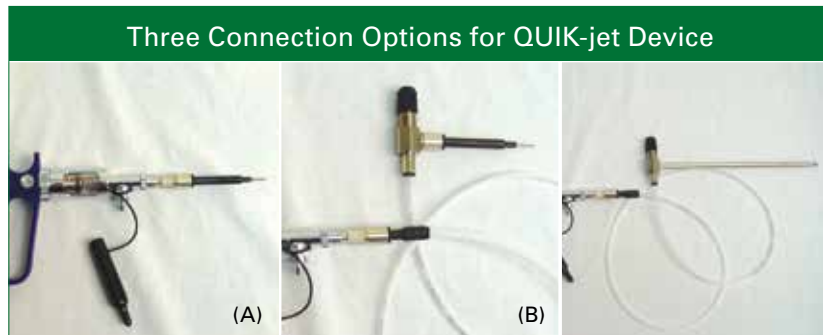
You can quickly train your own team or allow a trained specialist to treat your trees using Arborjet technology. Either way, the process is as simple as Drill, Plug, Inject!



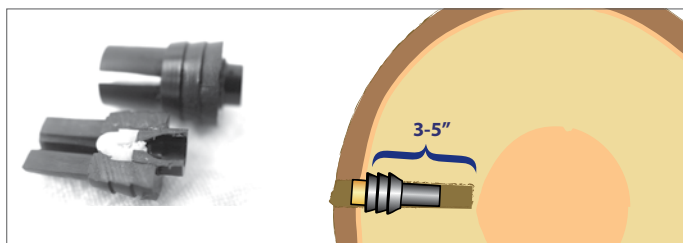
- With all of our injection methods you will see:
- The most rapid results in controlling pests & disease.
  - An environmentally safe application.
  - A sealed injection site.
  - Treatments that can take place without interrupting the use of your buildings and grounds.

# PALM INJECTOR KIT FEATURES FIVE WAYS TO INJECT

For ease of use and versatility, the Palm Injector Kit can be connected in five different ways. When using the QUIK-jet device, you can simply use a VIPER needle (A), or a VIPER needle with line (B), or a STINGER needle with line (C). When using the TREE I.V. device, you may either use a VIPER needle with line (D) or a STINGER needle with line (E). For more information on determining which method is best for your purposes, call us at 781.935.9070.

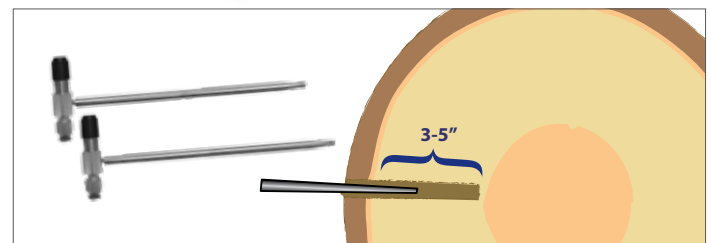


## ARBORPLUG® TECHNOLOGY



Arborplugs are set into the tree and a needle is inserted through the internal rubber septum. Arborjet's products are quickly delivered through the Arborplug. Arborplug users are guaranteed to have the most accurate, effective, and the safest tree injection experience.

## STINGER TECHNOLOGY



STINGER technology allows the applicator to apply products directly to palms without the use of an Arborplug. The STINGER needle is a high grade stainless steel which will provide many years of simple, reliable injection service. While the Arborplug is not necessary when using the STINGER needle, the Arborplug can be applied after the injection to seal the injection site.

## STEP 1

Measure trunk DBH" to determine dosage.



## STEP 2

At trunk height of 24" - 48", drill 1/3 of trunk diameter or 4 inches into palm (whichever is less).



Use a 3/8" drill bit when using the #4 Arborplug® and 9/32" drill bit when using the #3 Arborplug.

## STEP 3

After drilling, disinfect drill bit with isopropyl alcohol or bleach solution.



## STEP 4

Using the plug setting tool and hammer, tap plug into trunk until tip of plug is flush with the trunk surface.



Plug slightly deeper than flush (1/16").

## STEP 5

Pierce the Arborplug with the needle on QUIK-jet device. Using even pressure, depress plunger on device until all formulation has been injected.



*Note: Only inject as quickly as the palm can absorb product. Some palm species may be difficult to inject after significant rainfall or irrigation.*

**Regardless of chosen formulation, please be sure to follow all label instructions for rates and safety procedures.**

# TOP TWELVE PALMS



## Coconut Palm (*Cocos nucifera*)

Use #3 or #4 Arborplug and inject using QUIK-jet

**Common issues:** Can be difficult to inject in moist or irrigated soils

Too much applied pressure with QUIK-jet can cause product leak from around plug causing leakage and staining

**Helpful hints:** If leakage occurs from around plug then tap plug in slightly deeper into trunk. If leakage still occurs, then wait 5 minutes before continuing the process or move on to another palm. Moving on to another palm will allow time for product to move up in trunk thus creating space for more products. The use of tree flagging tape and a sharpie to note the dosage will eliminate any misapplication.



## Bismarck Palm (*Bismarckia nobilis*)

Use #3 / #4 Arborplug and inject using QUIK-jet

No real injection or uptake issues with this palm.



## Royal Palm (*Roystonea oleracea*)

Use #3 / #4 Arborplug and inject using QUIK-jet

This palm will take product up great in any condition.

**Note:** The trunk has a very hard epidermal surface.

When drilling into the palm the hole needs to be "rounded" out in the trunk's outer layer to accommodate the plug.



## Queen Palm (*Syagrus romanzoffiana*)

Use #3 / #4 Arborplug and inject using QUIK-jet

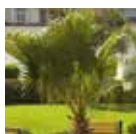
**Note:** Queens can be more difficult to inject under wet conditions. Bleeding from injection area can also be an issue when too much pressure is applied during injection process.



## Areca Palm (*Chrysalidocarpus lutescens*)

Use #3 Arborplug and inject using QUIK-jet

This is a multi-stem palm and each trunk should be injected separately. Because the Areca trunks are generally small in diameter use the #3 Arborplug and inject only trunks over 3 DBH".



## Mexican Fan Palm (*Washingtonia robusta*)

Use STINGER Needle (Palm Injector Kit) with the QUIK-jet or TREE-IV and #3 / #4 Arborplug

Drill through the palm boot with either the 3/8" or 9/32" drill bit (depending on plug size) until you feel the drill bit hit the trunk. Once you drill to the trunk continue to

drill about 1/2" into the trunk. This hole will be the pilot hole for the plug. Switch to the 3/16" drill bit and drill directly into the center of the pilot hole and drill into the trunk 1/3 of the total trunk diameter. Insert the STINGER until the tapered tip is seated into the trunk. Inject through the STINGER needle into the palm. When all the dose is in the palm, wait 30 seconds before removing the STINGER from the trunk to relieve any pressure built up in the trunk. Remove the STINGER and set plug to seal the hole.



## Cabbage Palm (*Sabal palmetto*)

Use STINGER Needle (Palm Injector Kit) with the QUIK-jet or TREE-IV and #3 / #4 Arborplug on "full boot" palms. Use #3 / #4 Arborplug and inject using QUIK-jet when boot has been removed.

Drill through the palm boot with either the 3/8" or 9/32"

drill bit (depending on plug size) until you feel the drill bit hit the trunk. Once you drill to the trunk continue to drill about 1/2" into the trunk. This hole will be the pilot hole for the plug. Switch to the 3/16" drill bit and drill directly into the center of the pilot hole and drill into the trunk 1/3 of the total trunk diameter. Insert the stinger until the tapered tip is seated into the trunk. Inject through the stinger needle into the palm. When the full dose is in the palm, wait 30 seconds before removing the stinger from the trunk to relieve any pressure built up in the trunk. Remove the stinger and set plug to seal the hole.



## Foxtail Palm (*Wodyetia bifurcate*)

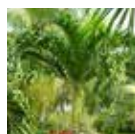
Use #3 / #4 Arborplug and inject using QUIK-jet

This palm will take product up great in any condition.

**Note:** The trunk has a very hard epidermal surface.

When drilling into the palm the hole needs to be "rounded" out in the trunk's outer layer to accommo-

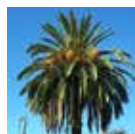
date the plug.



## Christmas Palm (*Veitchia merrillii*)

Use #3 Arborplug and inject using QUIK-jet

No real issues with this palm. It is a smaller diameter palm so use the #3 Arborplug.



## Canary Date Palm (*Phoenix canariensis*)

Use STINGER Needle (Palm Injector Kit) with the QUIK-jet or TREE-IV and #3 / #4 Arborplug

Using either the 3/8" or 9/32" drill bit (depending on plug size); drill 1/2" into the trunk. This hole will be the pilot hole for the plug. Switch to the 3/16" drill bit and

drill directly into the center of the pilot hole and drill into the trunk 1/3 of the total trunk diameter. Insert the stinger until the tapered tip is seated into the trunk. Inject through the stinger needle into the palm. When the full dose is in the palm, wait 30 seconds before removing the stinger from the trunk to relieve any pressure built up in the trunk. Remove the stinger and set plug to seal the hole.



## Sylvester Date Palm Tree (*Phoenix sylvestris*)

Use STINGER Needle (Palm Injector Kit) with the QUIK-jet or TREE-IV and #3 / #4 Arborplug

Using either the 3/8" or 9/32" drill bit (depending on plug size); drill 1/2" into the trunk between the leaf scars.

This hole will be the pilot hole for the plug. Switch to

the 3/16" drill bit and drill directly into the center of the pilot hole and drill into the trunk 1/3 of the total trunk diameter. Insert the stinger until the tapered tip is seated into the trunk. Inject through the stinger needle into the palm. When the full dose is in the palm, wait 30 seconds before removing the stinger from the trunk to relieve any pressure built up in the trunk. Remove the stinger and set plug to seal the hole.



## Medjool Date Palm (*Phoenix dactylifera*)

Use STINGER Needle (Palm Injector Kit) with the QUIK-jet or TREE-IV and #3 / #4 Arborplug.

Using either the 3/8" or 9/32" drill bit (depending on plug size); drill 1/2" into the trunk between the leaf scars.

This hole will be the pilot hole for the plug. Switch to the 3/16" drill bit and drill directly into the center of the pilot hole and drill into the trunk 1/3 of the total trunk diameter. Insert the stinger until the tapered tip is seated into the trunk. Inject through the stinger needle into the palm. When the full dose is in the palm, wait 30 seconds before removing the stinger from the trunk to relieve any pressure built up in the trunk. Remove the stinger and set plug to seal the hole.