

Basic Instructions for Your Plantra Tree Tubes (Treeshelters)

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Before we get started just a quick note about Plantra Tree Tubes in general - All Tree Tubes from Plantra are designed to protect and grow small deciduous or hardwood seedling trees and direct-seeded acorns and nuts. The key point is that Plantra Tree Tubes need to be taller than the seedlings they are intended to protect and grow and are not intended for use as a "bark wrap" around sapling trees (trees that are already taller than the treeshelter) – please use Plantra Tree Bark Protectors for this purpose. See Figure 1

Please Note: Installation instructions assume seedling has been properly planted according to your nursery's recommendations.



FIGURE 1

Proper Tree Tube and Support Stake Installation

1. Support Stake Installation

- a. Choose location for tree tube support stake We recommend the north side of the seedling to avoid the stake blocking sunlight. On exposed, windy sites place the stake to the windward side for more stability.
- b. Position the stake 1-1¹/₂ inches from the seedling. Then drive support stake straight into the soil (about 14-16 inches depending upon the tube height), just deep enough to keep the top of the stake about 1-2 inches above the top cable tie of the tree tube (hint use standing tree tube as a guide to assure proper stake depth).

2. Tree Tube

- a. Orienting the tree tube
 - For Phyto-Builder™ Tree Tubes there are three sets of large holes for securing the cable ties. The top of the tube is the end with the two sets of tie holes that are the closest together.
 - For the Tubex Combi tree tube the flared end is the top.

b. Pruning side branches

• If your seedlings have side (lateral) branches please remove them carefully using a well-sharpened pruning shearers before installing the tree tube. Do NOT bend side branches upward to squeeze or otherwise force them into the tree tube. Doing so will encourage narrow branch crotch angles that can cause weak branching and other problems as the tree matures. See Figures 2 and 3.



FIGURE 2

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FIGURE 3

Prune seedlings to single stems before "tubing" them. It is important that the seedling fit loosely and comfortably inside the tree tube to provide room for air movement and proper leaf development.

- c. Once any side branches have been removed it's time to place the tube over the seedling and secure it to the stake. The two easiest methods are as follows:
 - Method #1

Install the tube over the seedling first before looping cable ties around stake.

Guide the tube gently over the seedling and seat the tube bottom firmly into the soil next to the stake. Next, insert the cable ties through the access holes wrap the cable ties around the stake, secure and cinch tight. The advantage with this method is that it is easier to center the tube directly over the seedling before attaching the cable ties to the stake.

• Method #2

Loop assembled cable ties over the stake first. With Phyto-Builder Tree Tubes, loosely pre-thread the cable ties through the access holes and assemble leaving the loop as large as possible to fit over the stake. Note: Tubex Combi Tree Tubes come with pre-threaded ties. Next, loop cable ties over the stake while simultaneously sliding tube down gently over the seedling. Seat tube bottom firmly into soil surface. The advantage of this method is more rapid field installation, which is helpful for contractors.

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Hint – For the strongest attachment please cinch the cable tie tight. Then re-insert the tip of the cable tie back through the opening near the head of the tie and pull tight. Doing so will ensure that the cable won't come loose if animals nibble on the ends. **See figure 4.**



Proper cable tie installation with tie-tip looped-back through.

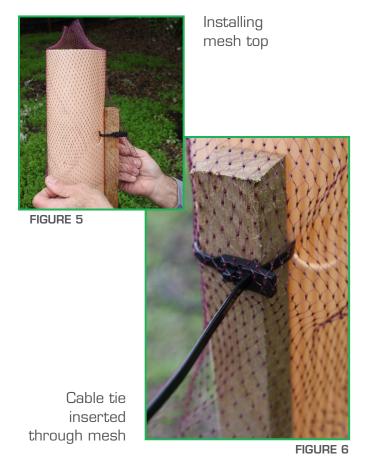
FIGURE 4

Hint - Once the tube has been firmly seated, mound some soil around the tube base to a height of 2 inches to keep out unwanted mice and voles and to maintain a wind-free micro-climate in the "nurture-zone" of the seedling (For taller tubes we've built "Cross-Flow™" venting to recharge CO2 and help acclimate developing seedlings for ambient conditions like proper dormancy in the fall).

3. Bird Exclusion Netting

All tree tubes offered by Plantra that are 4ft and taller come with bird exclusion mesh netting that is intended to discourage birds from entering the tubes where they could become trapped. Simply stretch the netting over the tube top (as if pulling on a sock) to the point where the top cable tie tail can be inserted loosely through the side to keep the mesh from being removed prematurely by wind.

See Figures 5 and 6.



4. A Word About Weed Control

Weeds and grasses steal light, water, and nutrients from your trees and provide cover for stem-girdling rodents. Every square foot of soil is capable of producing a limited amount of biomass growth. By controlling weeds, you channel all of that growth potential into your trees to optimize their growth.

Using Plantra Tree Tubes will make your seedlings easier to find for weed control and provide protection against weed sprays. If herbicides are not intended for your planting, weed control still needs to be achieved and the best way to accomplish this is with weed mats. See Figure 7.



Using weed mats assures that every square foot of ground covered contributes directly to your new seedling and reduces follow-up efforts (and money spent) trying to control competing vegetation after the fact.

FIGURE 7

Tree Tube After-Care

Plantra tree tubes are designed to last for years - until your trees are big enough to make it on their own. In the first season or two, leaves will grow inside the tree tube as the seedling grows. Please do not remove green leaves - they are important to fuel the tree's early growth and should be left to grow and photosynthesize the sun's energy.

To keep your trees protected beyond the first growing season, do not remove Plantra tree tubes until the tree trunk inside has grown to the size of the tube diameter. The tree tubes are perforated along two sides their entire length, allowing the tube to split open once the trunk diameter grows bigger than the diameter of the tube. Waiting until the stem grows to the size of the tree tube diameter assures that your tree is "wind-firm" and ready to support itself entirely and allows the tube to protect the main trunk against damage by antler rub, gnawing rodents or mechanical injury. Once your trees outgrow the tree tube diameter the tubes should be collected and removed from the field.

Hint: Prune lateral branches above the tube to wind-firm your trees. Trees grown in Plantra tree tubes will grow fast, straight and strong. As a result, the new growth that emerges from the tube top will be exposed to wind conditions that may be too strong for the developing canopy. To help your trees gradually become wind-firm, it is advised that a portion of the lateral or side branches be removed to reduce wind-load. Remove enough lateral branches to assure that the main trunk remains upright (not leaning to one side) in windy conditions.

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