



Care and Handling

Suggestions:

Bareroot trees and shrubs offer a very economical source of plant material for your product line, and provide a wide selection of varieties of high quality as well. At Carlton, climate controlled storage facilities are available to house the entire crop, providing an ideal environment for your bareroot products. We carefully pack your trees and shrubs with moist straw, shingle-toe or shredded paper to control dehydration in storage and during shipping. Upon receiving the plant materials, proper care and handling will help insure your success with your bareroot products. The following information provides many very helpful tips for handling your plant products, please keep in mind that these are only general tips and suggestions, there may be special circumstances or situations requiring special handling. Always use prudent nursery practices when handling nursery stock and do not hesitate to contact Carlton Plants or your local extension agent if you should have any questions or concerns.

- 1. Preparation prior to receiving shipment...** Bareroot trees and shrubs should not be exposed to the open environment for even a short period of time prior to planting. An area for temporary storage and all supplies for planting should be ready prior to the arrival of the plant material. Planting immediately or within a few days of delivery is recommended.
- 2. Dehydration/Temperature Control...** Since dehydration is one of the biggest factors influencing successful handling of bareroot plant material, it is important to take all measures necessary to prevent dehydration from occurring. If you have cold storage facilities, try to maintain a temperature of 34° F and a relative humidity of 90% as an ideal environment. If cold storage facilities are not available, store plant material in a cool, protected area; packing the roots with straw, shingle-toe, shredded paper, etc.; cover roots with a tarp; keep plant roots moist; and watch carefully for temperature extremes. Bareroot plant material should not be exposed to temperatures below 28° F nor should they be exposed to extreme high temperatures. If the plants must be heeled-in, use leached bark dust, leached sawdust, coarse sand etc., for only as long as is absolutely necessary prior to planting. Using leached storage materials is very important since many wood products contain Tannic Acids and Phenols that can be harmful to plants. Maintain adequate moisture in the storage media and check at least twice a week to insure the media is still moist. Re-hydration of plants prior to planting is an option that can be very beneficial in transplanting. This may be accomplished by soaking the root systems in water for several hours, (not more than 12), just prior to planting.
- 3. Root pruning...** Remove split or broken roots and slightly tip (no more than a fingertip) the remaining roots to initiate new root starts. Avoid excessive root pruning prior to planting. Remember that the root system on a dormant plant is the storage site for all the food reserves from the previous year. Do not try to match the plant to the hole or the container size by excessive pruning. Rather, match the hole or container to the size of the plant.
- 4. Media/Soils...** The rule of thumb is to keep it simple. The use of a medium textured mix is advisable for bareroot plant materials. The use of some composted materials or manures is not recommended since the release time of the nutrients contained in these materials is uncontrollable. They may also tend to be high in soluble salts and may contain weed seed or other foreign matter that would be undesirable. We recommend a full spectrum fertility analysis on the soil to be used prior to using it. This would include all major and minor elements, organic matter content, pH factor and soluble salts.
- 5. Planting Depth...** Be careful when planting your bareroot plants to not plant too deep. The proper planting depth should correspond to the depth that the plants were originally planted prior to harvest. This is easily distinguishable by the change of color where the rootstock joins the top. There is usually an area right at this level that is a little lighter in color than the top itself.

6. Watering After Planting... The rule of thumb for the field-planted bareroot materials is approximately 1 inch per week during the growing season. There is no rule of thumb for containerized materials since they will vary by location, media texture, watering method and local or state run off regulations. Just try to keep them moist, (not wet), during the growing season and use good horticultural practices and common sense. Any extremes in weather or environmental conditions may call for individual modifications. Just be aware of this fact and monitor those conditions regularly.

7. Fertilization... Be very cautious with fertilization after planting bareroot materials. Since the first season is normally an establishment period for these plants, the fertilizer use will tend to be very nominal. Be accurate in your measurements. Check with your local extension personnel for specific crop requirements for your area.

8. Varieties Requiring “Special Treatment”... There are some plants that do require a certain amount of special attention in order to insure their success in your nursery. Some of these items would be: **ALL Betula, Celtis occidentalis, Carpinus caroliniana, Cercis canadensis, ALL Crataegus, ALL Quercus, Styrax japonica, ALL Ulmus, and ALL Buddleia.** These varieties are just naturally more sensitive to extremes of any kind. This sensitivity may be mitigated by following the suggestions offered below. Pot or plant these varieties first. Do not plant these varieties, especially, on a hot and windy day. Anti-transpirant materials may be beneficial in controlling moisture loss after transplanting. Maintain adequate moisture to the plants during the entire handling process and after planting. Be very cautious when selecting your fertilizers and pesticides for these crops. Sweating of some of these varieties may also be beneficial, please contact your sales representative or the Carlton Plants office for instructions regarding the proper procedure. Another variety that requires a specific handling treatment is **Liriodendron tulipifera.** This variety should be trunk wrapped with tree wrap throughout the first growing season to reduce the possibility of sun scald injury.

9. Concerns/Questions... We very much appreciate reports on your shipments as soon as they are received. Shortages, overages and breakage must be reported within ten days following delivery. Please double check your counts including the number of plants in each bundle as quantity per bundle can vary. Minor breakage can often be taken care of with a pair of pruning shears. All other claims must be received by the 15th of July, following the date of delivery. Please keep in mind that plants are a perishable product and that you can expect some minor losses in transplanting. We will not be liable for any sum greater than the amount originally received for the order.

We hope you will find these suggestions helpful when processing your products. Please feel free to contact your Sales Representative or Carlton Plants home office if you have any questions or considerations regarding these guidelines. Home office Phone (800) 398-8733

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