

Additional care and modified techniques should be used when receiving and planting bareroot liners in the late season, in warmer weather, and in high humidity conditions. Increase transplant success by following the tips below:

RECEIVING:

- Hydration is the most critical factor to bareroot liner success. Exposed roots can be damaged when left uncovered for even a few minutes in warm or windy conditions.
 - Water material immediately upon receipt and ensure it does not dry out between unloading and planting.
 - If possible, submerge and soak roots in water for 30-60 minutes.
- Store liners in a refrigerated area if the material will not be planted within a day or two.
- If refrigerated storage isn't an option, keep material in a shaded area protected from drying winds.
- Recommended heeling materials: rotted wood chips, sawdust, coarse mason sand, or pea gravel.

PLANTING:

- Plant containers in up to 30% shade to reduce stress.
- Plant during the coolest parts of the day.
- Top dress soils and media with compost to increase moisture retention.
- Irrigate newly planted field crops with at least 2" of rain every other day for a few weeks until established.
- Irrigate container plants by thoroughly soaking the media after planting. Then maintain even moisture levels. Avoid over and under watering, and adjust as plants begin to leaf out.
- Lightly prune both tops and roots evenly, leaving as many fine root hairs as possible. Do not over prune root systems to fit into a container, instead use a larger size to prevent root circling.

For more specific variety pruning tips, use the list on the next page as a guide to prevent disease and encourage healthy growth.

PRUNE PRIOR TO PLANTING:

- *Aronia*
- *Berberis*
- *Betula nigra* 'BNMTF' DURA-HEAT
- *Deutzia*
- *Euonymus*
- *Forsythia*
- *Hypericum*
- *Ilex*
- *Itea*
- *Hydrangea paniculata*
- *Kolkwitiza*
- *Ligustrum*
- *Lonicera*
- *Philadelphus*
- *Potentilla*
- *Pyrus*
- *Rhamnus*
- *Ribes*
- Rosacea Family
 - *Amelanchier*
 - *Crataegus*
 - *Malus*
 - *Hibiscus* - up to 1/3
 - *Rosa*
 - *Prunus*
- *Salix* - hard

PRUNE AFTER PLANTING:

- *Acer* - all but *A. griseum* and *A. saccharum*
- *Ginkgo* - during active growth
- *Catalpa* - during active growth
- *Cladastris* - during active growth. Leave at least 1" above the bud
- *Cornus* - shrub forms
- *Cotinus* - during active growth
- *Gleditsia* - during active growth
- *Gymnocladus* - during active growth
- *Hydrangea quercifolia* - during active growth
- *Liquidambar*
- *Liriodendron* - during active growth
- *Magnolia* - during active growth
- *Myrica*
- *Physocarpus* - during active growth
- *Platanus*
- *Populus* - during active growth
- *Quercus*
- *Rhus* - during active growth
- *Tilia*
- *Ulmus* - hard
- *Viburnum*
- *Weigela*
- *Zelkova*

OTHER TIPS:

- Only prune off lower limbs in low humidity to prevent disease:
 - Fabaceae family; *Cercis*, *Gleditsia*, *Gymnocladus*, *Robinia*, *Wisteria*, etc.
 - Warm climate Oaks; *Q. acutissima*, *Q. imbricaria*, *Q. muehlenbergii*
- Prune in the winter/during dormancy:
 - *Acer saccharum*
 - *Acer griseum*
 - *Syringa* - French Hybrids
- Do not prune in first season:
 - *Betula*
 - *Carpinus*
 - *Cornus* - tree forms
 - *Hamamelis*
 - *Maackia*
 - *Ostrya*
 - *Parrotia*
 - *Styrax*
- Wrap *Liriodendron* and *Parrotia persica* trunks to prevent sunscald.