

The Cooke Book®

Recipes for a Successful Bareroot Program



Training & Information Videos by LEC on YouTube
<http://www.youtube.com/user/LECookeNursery>

Advantages of Bareroot Nursery Stock

- Bareroot plants are a great value! They cost less than plants planted in containers.
- Bareroot plants are lighter in weight and less bulky! Freight expenses are considerably cheaper and workman's comp issues are less as well.
- Bareroot is easy to handle, transport and plant.
- What else is your staff selling in January and February! Why not take two non-profit months and make a profit!
- Potting up bareroot plants helps you reduce your costs, helps you to develop the quality you are looking for and your customers will be assured that they are grown in the same climatic conditions as their neighborhood!



Provided by

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Ordering Bareroot Nursery Stock

- Order early to reserve high demand varieties.
- If potting bareroot trees for sale, we recommend the following caliper or height per the following size grower pots:

For trees

5 gal - 3/8", 1/2" and 5/8"

7 gal - 5/8" EZ-Pick® Fruit Trees look best in this size!

15 gal - 5/8" and 3/4"

25 gal or 24" box - 1", 1 1/4" and 1 1/2"

For Bush / Clumps

3 foot heights and smaller

4', 5' and 6' heights

8' and larger heights

For shrubs

2 gal - 6", 9", 12"

5 gal - 18", 2' and 3'

15 gal - 4' and 5'

25 gal or 24" box - 6', 8' and larger

- Order pots and planting media (See Media Recommendations Page 7).
- If a new media, make sure to have a soil analysis done. We are all trying to cut costs and be environmentally correct, but we are dealing with living things and we need to make sure their needs are met in order to be successful. It's also nice to have a 'benchmark' in case problems develop!
- Make sure you have a water analysis done. In urban areas, reclaimed water is generally chlorinated and high levels of chlorine can severely inhibit root development. Again, have a 'benchmark' just in case!

Selecting a Pot Size

The size of your pot is determined by the size of the roots. Remember, prune as little as possible on the roots.

Roots should not be crowded or circling in the pot.

Arrival and Unloading of Bareroot Nursery Stock

- Handle the stock carefully.
- Avoid walking or climbing on top of the nursery stock.
- Water roots on arrival and keep moist.
- Protect roots from freezing and drying out. Cover with rug pads or heavy tarps (not plastic) or put in a building.

See video on


Storing Bareroot Plants

- If a cold storage facility is available, store at 34° - 38° F and maintain humidity at 90% or more.
- If cold storage is not available, you can wet down the plant material and store in a cool, damp, protected area. It is essential that the roots remain moist. You could cover the roots with shingletow and then with carpet pads. Remember, hard frosts will burn through plastic and thin tarps.
- For longer storage, healing the roots in coarse cement sand is the best. Organic mulches generate heat that may push your plants to root prematurely. Organic mulches also hold more water and some of the roots may be very sensitive to too much water.

See video on


Proper Planting Depth

Simple rule of thumb is to plant at the same depth as grown before we harvested. Too deep and you risk rotting the cambium layer and killing your plant. Planting on the shallow side is not as unforgiving unless you're a pecan. The main thing is to cover the root collar.

Watering

As you are planting the bareroot, water in the media to eliminate all air pockets around the roots. If big roots, you may need to try again the next day to be sure air pockets are gone.

Stop watering until your dormant tree or plant is in leaf. Wet media is by far the #1 reason for bareroot losses. Your tree only has support roots when planted. The white feeder roots need to re-develop but will not grow in wet media primarily because it cannot get the oxygen it needs. White feeder roots grow quickly to access water and nutrients in damp, but not wet media. If the media is always wet, the dormant tree/plant will not grow good roots and often develops adventitious roots recognized by whorl-ring and callous-like growth at root nodes. Sometimes the roots will grow upwards to find oxygen.

No Leaves - No Need for Water. Media will remain damp in the root zone for months. Do not worry if the top of the media dries down a few inches. If some of the trees/plants leaf out early, do not water the others. When it rains, it comes with oxygen which is usually beneficial. Rain, whether a little or a lot is usually sufficient to get the tree through the dormant period.

Summary: Water day of canning and not again until leaves on tree.

You  See video on Bareroot Display Boxes

- Selling bareroot is almost 'retro' in this day and age. It's part of our nursery heritage. You are also probably looking for customers to come through the door during that time of the year! It is still an excellent way to compete in the market place, offering great value to consumer's who are stretching their dollars or are really into gardening.
- Setup is relatively inexpensive. Remember that you'll need to protect the roots from freezing and that the roots need to be covered and kept moist but not soaking wet! Simply constructed bins (or fruit bins if available) are inexpensive and easy to convert for other year round displays.
- Some of you find that pruning the trees as you heel them in is the easiest and most efficient way. Others find that it's an opportunity to teach your customers the basics of pruning and sell additional products such as clippers, stakes, Miracle Garden Tie, rooting hormones, and soil amendments.
- Packaging your customer's purchase in plastic bags is the easiest way. Make sure that the roots are covered with moist shavings, shingletow or newspaper until your customer gets home and plants them.
- We would recommend developing a 'Bareroot' handout to give to each customer. Some things to include in it would be:
 - Planting and staking instructions with diagram
 - How to water - not over water. (Water once, then not again til leafing)
 - Material check list
 - Mulch (plants per bag)
 - B1 or Superthrive, Fertilizer
 - Stakes and tree tie
 - Dormant spray
 - If you would like help in developing these handouts please contact your sales representative or call the office!
- Our most current Edible Fruit Descriptive Guide is now available to download and read right on your Smart Phone. It has pertinent information like chill hours, ripening times, pollinizer needs, planting distances, sales tips and lots of other information! <http://www.lecooke.com/Images/Edible-Fruit-Guide.pdf>



New!

Merchandising and Advertising Trees

- For years, the big dilemma in displaying trees was "Should we display them alphabetically by botanical or common name?" Why not ask the consumer? The consumer usually knows what attribute in a tree they are looking for, they just don't know what varieties fill those needs.
- For fruit trees, lay them out by their fruiting attributes. For example, Apricots, Nectarines and Peaches should be sold by month of ripening: June Ripening, July Ripening, August Ripening (or earlier and later too). This immediately gives your customer a choice to buy three trees for fruit all summer. Apples can be sold by color (Red, Green, Yellow, Striped) or ripening season (early or late). Figs sold by Black, Brown or White/Green. Pears by Asian ("Apple") or Domestic (Early & Late season). Cherries by Sweet ("Fresh Eating") and Sour ("Pie/Baking Cherries"). Plums by Red Meat and Yellow/Amber Meat. Seedless Grapes by Green, Red and Purple/Black or Early, Mid and Late Season.
- Flowering, Ornamental and Shade trees can be sold by their attributes as well. Here are what your customers ask for: Spring Blooming, Summer Blooming, Fast Growing, Suitable for Smaller Yards, Fall Color and Weeping. Some ask for "Attracts Birds" or "Attracts Butterflies" You will note that these attributes are noted right on our picture tags using the icons at the bottom and they are noted in our catalog to the right of every tree description.

- Most of our products have 8 1/2" x 11" descriptive pages with eye catching photos to be used as Point of Sale signage. These can be downloaded from our website and laminated at your nursery or, for a nominal cast, we can



print and laminate them for you.

Prices for this service are on the Sales Aids page of our yearly catalog.

- Our variety tags come with color pictures, pertinent plant information as well as helpful and informative icons! All right at point-of-sale!



Benefits of Trees

Energy Conservation Benefits of Deciduous Trees

- Trees placed 10 - 20 feet from your house, patio, driveway and air conditioning unit, could reduce your energy bill by 25%!
- During the summer, trees placed on the south and west sides, reduce the amount of heat absorbed and stored. They also give off water vapor and this cools the air like a swamp cooler!
- An energy efficient home in Tuscon, Arizona with three 25 foot tall trees can save \$200 - \$400 per year or about 25% in cooling costs!
- If the trees are on the east, west and/or south sides, when the trees drop their leaves in the winter, it allows the house surfaces to absorb the heat and thereby warm your house!

Air Quality Benefits

- Trees absorb gaseous pollutants such as smog!
- Trees filter dust, ash, pollen and smoke!
- An average tree absorbs 26 pounds of carbon dioxide from the air each year! That's the amount of carbon dioxide your car emits if you drive it 11,000 miles per year!
- Trees reduce ozone levels!
- Trees reduce hydrocarbon emissions from parked vehicles. Plus the car is cooler when you get in!
- A healthy tree such as a 32 foot Ash produces about 260 pounds of oxygen per year. The average person uses 368 pounds per year. So it's safe to assume that planting 2 fast growing trees must be the right thing to hang your hammocks from!

Potting Mediums

Potting mediums vary regionally throughout the country and are dependent upon what natural resources are economically available. Over the years, experience, (sometimes painful and costly) has shown that there are some mediums that you don't want to use unless the toxins associated with them are completely leached out.

Among the best things to use for planting mediums are:

- Pine and Fir chunky wood that has been aged. Remember as fresh wood breaks down, it uses lots of nitrogen in the process leaving little for the plant.
- Rice Hulls
- Peat moss that is low in salts.
- Coarse cement sand (washed sand) - Don't use plaster sand as it's too fine.
- Sandy loam - stay away from heavy clay soils
- Perlite #3 - use this if you're trying to 'lighten' the weight of your mix
- Volcanic rock and pumice can be used to 'lighten' the mix but have it tested as some can have toxic levels of copper or boron.
- Waste materials - While we are all trying to do our part, again, be careful. One never knows how many oak pallets were ground up to make the mix and oak is loaded with tannic acids!

Some of these mediums that need to be watched carefully and avoided are:

- Manures and kelp generally have high concentrations of salt.
- Cotton Gin wastes probably contain residual defoliant.
- Cedar products contain high amounts of thujaplicin acids.
- Redwood is high in phenol acids.
- Barks are generally high in phenol acids
- Oak is high in tannic acids.
- Walnut, Pecan shells and husks are high in tannic acid.
- Eucalyptus leaves are high in phenol acids.
- Palm trees are extremely high in many minerals (salts).
- Green waste (such as grass clippings) store chlorine from waterings and will probably raise the levels of salts to unacceptable levels (high zinc too).

What Blend Should We Use?

- Proven blend is 1/3 sandy loam, 1/3 coarse sand and 1/3 fir shavings or rice hulls. A lighter mix which does well is 60% pine or fir chunky wood (preferred) or shavings, 20% coarse cement sand, 20% #3 perlite or rice hulls. Do not use cedar, redwood or barks such as pine, oak or fir. Avoid any organic that turns black. (Clean rice hulls are sold at equestrian centers).

8 Preparation for Container Planting

- Make sure you have plenty of potting medium and that you have gotten a soil and water analysis.
- Do you have enough pots?
- Rehydrating the roots

Probably not a mandatory step in regards to most items that you have purchased but not a bad habit to have as it doesn't take much time or money and some items will benefit. Simply dip (not soak) the roots in water with some rooting hormone like B1 or Superthrive. This also ensures that the potting media will adhere to the roots when you plant.

Sweating Trees

- Normally not needed in mild winter, high humidity areas. Recommended for desert-like climates. Common Hackberry is a must. Others such as Fig, Albizia, Mulberry and Redbud have thin skins and tend to dehydrate in low humidity areas. Bury in moist sand, media or shavings until buds swell. Better (and easier) - put in a greenhouse with temperature and moisture controls. This is very important in windy, dry climates.

Special Care

If you have any of the following items on order, please print and read the special care pages on:

www.lecooke.com/care-information/care-of-bareroot.html

Pomegranates: Reduce top, thin out all small wood, leave heavy limbs. See photos.  (Also see [LEC Video on this topic](#))

Lacebark Elms & Zelkova: Thin out small wood, leave heavy limbs.

Fig Trees: A subtropical fruit. Protect from freezing, see sweating.

Redbuds, Smoke Trees, Desert Willows, Vitex: Classified as natives, must be kept dry - especially Western Redbud and Smoke Tree. Maximum 50% organic in media and no water until in leaf after soaking in at planting time.

Pecans: Use pecan pots or double pots so 100% of root covered (see photos on website). Cut some root if necessary. If any (even 1/2") of root that was underground is exposed, the tree will girdle and die. Bury 2" deeper to cover settling.