



THE
AMERICAN
CHESTNUT
FOUNDATION®

TACF® Fact Sheet

How To Grow

V 1, 2009

How To Grow Your Chestnuts

A Quick Guide to Growing Chestnut Seeds and Seedlings

Storing Your Seeds:

Keep seeds cold but don't freeze them. Between 34° and 40° is optimal. The radicle (young root) will likely emerge during cold storage.

Seeds need to be kept damp. Not soaking wet, but damp. Store seeds in moist peat moss inside a plastic bag or container. Peat moss has anti-fungal properties that will prevent the growth of mold. Moist peat moss should be wet enough that it can be squeezed it into a ball without any water dripping out. Check often to make sure peat is not too wet (encourages mold) or too dry and make any adjustments as needed.

The vegetable crisper drawer in the refrigerator is usually a good climate. Just watch out for fresh fruit – the ethylene produced can cause the chestnuts to ripen too quickly.

MAKE SURE YOU MOVE SEEDS AS LITTLE AS POSSIBLE. They are very fragile and you don't want to break off the radicle.

Starting Your Seeds:

A 2-quart milk or juice carton, with holes punched in the bottom for drainage, works well. Alternatively, a tall (12" deep), narrow pot will suffice.

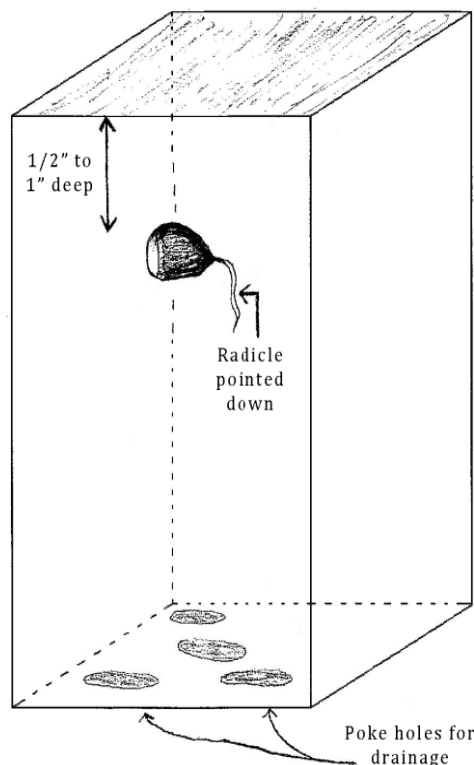
Fill with soilless potting mix (works better than potting soil). Composted bark is also appropriate. Our scientists use a blend of 1/3 each peat, perlite and vermiculite. A well-aerated potting mixture is very important, as chestnuts will rot if they are kept too wet.

Plant your seeds no more than a ½ - 1-inch deep and be careful with the radicle. Remember it is the root and should point down.

Your seed needs to be watered about the same as you would a woody plant; allow potting mix to dry out a little between watering. If kept too wet the seed may not germinate or the seedling may die.

Once sprouted, ease your new seedling into full exposure to sun and brisk wind. Remove any remnant nut from the base of the seedling so as not to attract wildlife.

Start your seeds in a deep container, like a 2 quart milk or juice carton



What Makes a Good Planting Location?

Well-drained soil is very important. Dry, sandy, gravelly or loamy soil is good. Make sure to avoid clay soils or those that retain water.

A gently-sloped area is a good place to plant, as is a well-drained bottom land.

The pH of the soil should be slightly acidic, between 4.5 to 6.5. You can find the pH of your soil by using a pH soil test kit sold at most gardening centers.

Chestnuts are shade tolerant but shade is not optimal; plant them in full sunlight, at least 10 feet away from adjacent woodlands. Full sun will encourage the tree to grow quickly. Chestnuts will only flower in full sun.

Weed the area where you are planting very well. You don't want other species of plants stealing the resources from your chestnut. A weed-free space about 3-feet in diameter is good for young trees. As the tree grows it should shade out competing vegetation.

What Do I Do With My Seedlings?

Introduce seedlings slowly to the great outdoors. Place them somewhere protected, such as on a sun porch or under a shade tree. Leafed-out seedlings will need to acclimate for a week or two, but bare-root seedlings do not, as they have no leaves yet.

Plant after the ground in your area has thawed and, for leafed-out seedlings, after risk of frost.

Dig a small hole the same depth as the pot or root system, and about twice as wide. Hold the seedling in the hole so that the root collar (little bump where the root and stem join) is level with the ground surface. Fill the hole half-way with soilless planting mix, pack well around roots, and then fill the rest of the way and pack down again. Air pockets can cause problems for the roots, so don't plant too loose but try not to crush the roots into the hole. Remember – the roots will get bigger and could grow around each other, girdling some of the root system.

Adding forest soil from under a pine or oak tree to the planting mix may be beneficial to young trees. Just mix a handful or two with the planting mix used for each tree.

Seedlings should be planted at least 10' apart in rows and those rows 20' apart. Your trees need room to grow!

Fertilizers are not necessary but can be beneficial to your chestnuts. If fertilizing, an acid-loving fertilizer high in nitrogen is recommended, but read labels well and be sure to follow directions closely.

How Do I Protect My Seedlings?

Chestnuts seem to be a delicious food for just about every animal around (including bears) so protecting your seedlings is very, very important.

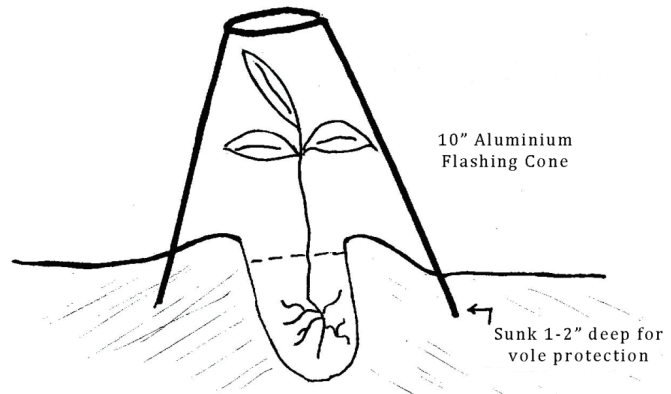
The #1 killer of chestnut saplings is WEEDS.

- Grasses are the worst; keep the area in at least a 2-3-foot diameter around your sapling free from any other plant species.
- Regular weeding is good, but sometimes it isn't enough. Landscape fabric and/or mulch work well for additional protection. If using mulch, some type of vole protection is also recommended.
- Herbicides can be used but should only be attempted by someone with experience using chemi-

als. ALWAYS follow the directions on the label.

Protecting your saplings from animals can be done a number of ways.

- At our farm in Meadowview, we take aluminum flashing and create a 10" high, 3" wide cone around our sapling and we sink it 1-2" deep to keep it secure. This cone, which is slightly narrower at the top, protects the sapling from root and basal damage by small animals and tunneling rodents, like voles.



The Meadowview Method of protecting chestnut seedlings

- Cylinders made of hardware cloth, tree shelters (2' high maximum) and even wire cages are also possible. Remember: you are protecting your saplings from everything from rabbits to turkeys to deer. Most tube or cylinder shelters can be sunk to protect against voles as well. The height of the shelter should correspond with the wildlife threats you have. If deer browse is a concern, use a taller shelter, if not, go smaller. It is best to pick the shortest shelter appropriate for your site. A combination of a small tube shelter for vole protection and a wire cage to keep larger animals away can also be used.

What Should I Watch Out For?

There are many pests that can be problematic for chestnut, such as Japanese beetles, cicadas and gypsy moths, just to name a few. The best way to identify and understand the pathogens, pests and other problems that may arise in your area is to talk to your local extension agent (<http://www.csrees.usda.gov/Extension>). They work closely with the USDA and have offices on the regional and/or local level. They will know your area and can provide most of the detailed information you will need.

If a problem should arise, your best bet is to keep in close contact with your local extension agent for input on proper control methods. You can also take photos of any unknown damage and contact TACF for suggestions.

In conclusion...

Ask lots of questions and keep track of how you care for your trees. Chestnuts are not always an easy species to grow but armed with education and a support network you should be on the path to becoming a successful grower!

For More Information:

If you have additional questions about caring for your new chestnut seeds or seedlings, don't hesitate to contact us! Contact information for all of our offices can be found at www.acf.org/Staff.php