

Vermont/ New Hampshire Chapter
The American Chestnut Foundation

April 2017

American Chestnut Educational Planting Guidelines



Introduction

The American chestnut tree (*Castanea dentata*) dominated eastern United State forests until it was decimated by a fungal pathogen, chestnut blight (*Cryphonectria parasitica*), between 1904 and 1950. The many benefits provided by this tree included fast growth to sizes exceeding any trees found in the east today. American chestnut wood was light weight, strong, and durable; its lumber resisted rotting, splitting, and warping. The nutritious nuts provided a major food source for wildlife and people. Its loss caused devastating and wide-spread economic and ecological disruption.

In 1983 the nonprofit The American Chestnut Foundation (TACF) was formed and began a backcross breeding program that has produced an American chestnut tree having the potential to resist chestnut blight. It has taken 35 years and six generations of backcrossing to produce these trees. They are known as **“Possibly Blight Resistant”** (PBR) American chestnuts. This substantial investment, combined with years of volunteer effort, is ongoing and striving to introduce potentially blight-resistant American chestnut stands into our forests.

“The mission of The American Chestnut Foundation is to restore the American chestnut tree to our eastern woodlands to benefit our environment, our wildlife, and our society.”

An educational planting is an opportunity for host organizations to partner with TACF. TACF will provide an appropriate number of PBR Chestnuts (generally five or six) for the host to plant in highly visible locations. The host agrees to join TACF and install interpretive signs. The benefit to the host is a living educational addition to ongoing programs. This outreach activity is a membership-building and volunteer recruitment strategy for TACF.

Guidelines include:

- 1) Site requirements
- 2) Planting Instructions
- 3) Host Responsibilities
- 4) TACF Responsibilities

Site Requirements

- 1) **Space**: Saplings will be planted no less than 30 feet apart from each other. This spacing allows for anticipated tree growth and cross-pollination. Multiple trees are needed because American chestnut does not self-pollinate.
- 2) **Soil**: Soil requirements include that soils have a pH between 4.5 and 6.0, are well drained, and preferably on a slope. A 6-8 inch layer of dark topsoil with good humus (organic) content is preferred and ledge should be at least 4 feet below the soil surface.
- 3) **Sunlight**: The site needs to receive full or nearly full sunlight (80% minimum). These trees will not flower without adequate sun exposure.
- 4) **Site Selection**: The site should be in a high visibility area and feature interpretive signs that identify the host and highlight the American chestnut restoration story. A frequently used area, such as a Town Common, is not recommended because mature American chestnuts produce multiple and very prickly burs.

Planting Instructions

American chestnuts are fast growing hearty native hardwood trees. Given proper care, they will thrive in most VT/NH soils. The most important aspect of planting and raising vigorous chestnut trees is good site selection away from frost pockets.

Remember: location, location, location!

If educational saplings are leafed out, plant on an overcast or rainy day if possible. If the buds have not broken, this is not important. In any event, thorough watering is needed immediately after planting.

Remove sod from a 3-4 foot diameter circle and dig a hole as deep as the root ball and about twice as wide. If the soil on the sides of the hole are hard packed, loosen it with a shovel. If the saplings are to be planted in a lawn or field some forest soil should be added to the planting hole to introduce beneficial mycorrhizae. Carefully remove the sapling from its container and/or cut off the burlap. Be sure to plant the sapling only as deep as it was grown in the nursery. The root collar (the bulge where the trunk and roots meet) should be at or slightly above the soil level. Excessive root systems may need pruning to avoid "j-rooting," a situation where roots grow back toward the main root mass. Backfill the hole with the best remaining soil, and build a berm around the hole to hold water close to the sapling. Cover the entire area under or slightly beyond the drip line (below outermost branches) with good mulch or compost. Keep this material about six inches away from the trunk to discourage rodent bark damage. Over the long run, weeds seriously stunt tree growth, so periodic mechanical disruption (e.g. hoeing) of the mulch and re-mulching will be necessary.

Host Responsibilities

- The host group or one of its members must be a member of TACF.
- The host must sign a TACF agreement to monitor tree growth and provide related feedback.
- The host must sign a TACF Germplasm Agreement that protects the genetic materials developed by TACF from misuse.

(Germplasm is the living genetic resources such as seeds or tissues that are maintained for the purpose of animal and plant breeding, preservation, and other research uses.)

- The host must install interpretive signs that summarize TACF efforts and identifies the host group.

(The TACF web site can be used to order signs and to estimate costs. Go to: acf.org and click on "Resources," then "PR Resources." Scroll down to "TACF Display Resources" and under it you will see "orchard signs.")

Actions and materials to be provided by the Host at the time of planting

- Recruit volunteers to help with site preparation.
- Sufficient tools to accommodate each planting team so that all saplings can be planted simultaneously (shovels, soil loosening pick, root cutters, sledge for driving stakes)
- Three to four gallons of water for each planted sapling
- Installation of tree shelters at the base of saplings to protect them from rodents
- Installation of five foot high wire mesh fencing to protect each tree from deer and other foraging wildlife

Maintenance to be provided by the Host

- During the first growing season each tree will be watered in any week that has less than one inch of rain.
- Monitor tree condition and periodically fertilize each tree in accordance with TACF recommendations (this will vary depending on native soil fertility, etc.).

Publicity to be provided by the Host prior to planting

- It is suggested that the Host invite a variety of local groups to participate in the planting and, if practical, that each one be given the opportunity to plant a sapling.
- Local newspapers and cable TV should be invited to cover the planting day.
- Local schools should be notified about the planting day.
- Local natural resource-oriented organizations such as Conservation Commissions, Garden Clubs, and Fish & Game Clubs should be invited to attend the planting day.

TACF Responsibilities

During the Educational Planting Process, TACF will work closely with the Host to:

- 1) Provide a staff person or volunteer to visit each proposed site with the host to assess its potential to support the growth of PBR Chestnuts. Assessment will include soil testing.
- 2) If requested, schedule a speaker to give a presentation to the Host group on the history, demise, and restoration of the American chestnut tree.
- 3) Provide healthy PBR Chestnut potted saplings.
- 4) Attend the planting day to oversee the procedure. Due to the delicate nature of these saplings all handling of them will be done by a TACF staff person or volunteer.
- 5) Return periodically to review the growth and condition of the trees.

In the event that any of the planted PBR

If trees become seriously infected with chestnut blight, TACF will replace them whenever possible. Please contact TACF regarding replacement needs.