

FINAL REPORT PER PHONE CALL w/ STACY
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Year One Progress Report

Establishment and monitoring of the first test plantings using BC₃F₃ seedlings on National Forests in the Southern Region (Federal Grant number 10-CO-11330134-055)

Principal Investigators and Institutional Affiliations

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Duration of project

May 2010-January 2012

Total amount received from TACF

\$10,000 split into two dispersals: \$6,000 to USDA Forest Service, Southern Research Station (SRS) and \$4,000 to The University of Tennessee (UT). The SRS and UT are working together cooperatively on this research project, but have different accounting systems and therefore funds were delivered separately and costs will be reported separately.

Costs

Table 1a. Current Costs associated with TACF grant from the Southern Research Station

Item	Cost
Student labor (GS-3, Forestry Aid, STEP)	4,904
Travel	1096
Total costs to date	5,922
Total funds remaining to date	78

The majority of the funds granted to SRS from TACF were spent on two student workers hired under the Student Temporary Employment Program (STEP) (Table 1a). The STEP students were employed from June 7, 2010 until August 13, 2010 as Forestry Aids GS-3 level. Their primary activities were data entry of chestnut data collected from the nursery and from the seven chestnut plantings already established. The students also assisted the scientist in collection of germination and growth data from the nursery. The students delivered tree shelters to the planting at the Beech Creek Seed Orchard and helped to install these shelters. The students also visited one of the plantings on the Cherokee National Forest that was installed in 2009 to collect survival and deer browsing data.

Travel costs were incurred to aid in the scientist's visit to existing and future chestnut planting sites. In August and September, 2010, the scientist visited the 2009 and 2010 plantings on the George Washington and Jefferson National Forest in Virginia, the 2009 planting on the Nantahala National Forest, and the 2009 planting on the Cherokee National Forest. These visits were to collect survival, competition, and light data from the plantings. In September and October 2010, the scientist visited the George Washington and Jefferson National Forest and the Cherokee National Forest to lay out-planting schemes for plantings to be established in 2011. In March 2011, the scientist incurred travel costs to provide a presentation to the southern regional meeting of TACF in Morrison, TN.

Table 1b. –Current Costs associated with the TACF grant from the The University of Tennessee's Tree Improvement Program

Item	Cost
Travel	\$2020
Total	\$2020
Total costs to date	\$2020
Total funds remaining to date	\$1980

To date, funds granted to UT by TACF were spent on overnight travel to lay-out planting sites on the George Washington and Jefferson National Forest and to establish plantings on the Cherokee, Nantahala, and George Washington and Jefferson National Forests (Table 1b). Remaining funds will be spent by October, 2011 on travel associated with growing season measurements.

Accomplishments

Study implementation and data collection

Since May 2010,

- We have collected data on competition (most abundant competitor, tallest competitor, density of competition), light (amount of photosynthetically active radiation above tree), growth (height and ground-line diameter), disease and insect/animal herbivory, and survival for 2853 chestnuts, 925 of which were the BC₃F₃ generation. These seedlings were planted at five tests in forested settings on three national forests, and one Forest Service seed orchard planting.
- Throughout the summer of 2010, we collected monthly growth data on 700 chestnut seedlings from the American, Chinese, BC₃F₂ and BC₃F₃ generations growing in the nursery. Those data will be related to genetic source and size of the chestnut at sowing. In March 2011, 1800 seedlings were lifted as bare-root stock and measured for number of fist-order lateral roots, height, and root-collar diameter.
- In March, 2011, we established six plantings on three national forests to test genetic differences and to determine effects of two silvicultural treatments (shelterwood with reserve and a midstory removal treatment). Each tree was treated with a deer repellent just after planting.

Technology Transfer

To date, we have presented results through several venues:

- Oral presentation at a scientific conference (Biennial Southern Silvicultural Research Conference, Charleston, SC, February 16, 2011)

- Oral presentation for University of Tennessee, Department of Forestry, Wildlife, and Fisheries Forest Ecology Class (February 10, 2011)
- Oral presentation and field demonstration at the Forest Service's National Advanced Silviculture Training workshop (Knoxville, TN, April 28, 2010)
- Oral presentation and field demonstration at the Forest Service's Upland Hardwoods training module (Bent Creek Experimental Forest, Asheville, NC June 8-9, 2010).
- Oral presentation at the Southern Regional meeting of TACF (Morrison, TN, March 5, 2011).
- A website has been kept up to date with the most recent information on the chestnut restoration study: <http://www.srs.fs.usda.gov/uplandhardwood/americanchestnut.html>
- We have conducted interviews with the Asheville *Citizen Times* and the Muscle Shoals' *Times Daily*
- Several peer-reviewed publications are currently in progress. We expect to have three publications submitted in 2011 and three more submitted in 2012.