

American Chestnut Cooperators' Foundation

2007 Newsletter

Send your report via our [Online Report Form](#) or to
Forest Service Road 708, Newport, Virginia 24128

Dear Friends and Cooperating Growers:

If you have reported on previous ACCF plantings and donated \$20 in 2007, and if we have a Grower Agreement Form on file in your name, **you are welcome to order American chestnut seedlings (through November) and/or nuts (until October 15)**. The 2007 cost per bundle of 25 or fewer American chestnut seedlings is \$27. Growers west of the Mississippi need to add \$5 extra per bundle to cover higher mailing cost. Please make the check payable to ACCF.

From the 2006 Virginia harvest we sent 3,880 nuts to cooperating growers, 4,698 nuts to nurseries in West Virginia, and last winter the nursery distributed 4,535 American chestnut seedlings to our cooperating growers.

HARVEST

You can either harvest chestnuts out of the trees in their burs or off the ground where they have dropped. Following last fall's abundant harvest, I thought we might switch to this second method, eliminate the storage problem and the job of getting nuts out of burs, and greatly decrease the numbers to be processed and sent to growers. The squirrels have been good cooperators for several years now, planting nuts in every one of our breeding orchards and even starting some of them right in the row where there was a space, so I do not mind letting them have a bigger share. However, Dave McCurdy tells me that the nursery chestnuts will produce a much smaller crop this fall because of poor pollination. So we must try for the big harvest once again, to be able to send the nursery sufficient seed to make 2008 seedlings.

Chestnut trees are individuals with different schedules: they do not all ripen their chestnuts at the same time, but over a period of roughly two weeks which, in Virginia, usually begins in the last week of September. Harvest starts when burs begin to crack open, then the burs on that tree may be ready to pick. However, burs which contain no viable nuts may crack open as much as two weeks early, and

chestnut trees often contain small numbers where the flowers happened not to be fertilized. Furthermore, the first chestnuts to make flowers contain much larger numbers of infertile nuts, because many of their flowers were receptive before any pollen was available. So before picking a tree we make sure that the cracked burs contain full, fat chestnuts, not sunken blanks. We use hand clippers and a pruning pole that extends up to 12 feet, and sometimes also a 6-foot ladder. Wearing leather gloves we collect the burs into dog food bags, marked with the date and the name of the mother tree and store them in a rodent-free cool place, in the basement or in lidded garbage pails in the shade.

MANY THANKS to the volunteers who helped pick chestnut burs in 2006: Matt Habersack, Albert Ward, Nate Faris, Rich and Harold Pierce. To help at harvest, e-mail Lucille at accf@hughes.net for a date and directions. We will not begin picking the burs before the week of September 24, leaving our yard at 9 a.m.; in afternoons the first week of October, we should begin getting the nuts out of the burs. We will not harvest on the weekends of September 22 and 29 because of home football games.

We check the storage bags once a week, dumping the contents onto a picnic table to see if more burs have cracked open . Wearing heavier leather gloves, we remove the nuts from their burs, then return the unopened burs to their bags for a few more days in storage, when they can be checked again. In years of fall drought, some burs will not crack open unassisted: rolling the bur back and forth underfoot sometimes does the trick. Burs which cannot be opened by humans may be scattered in the woods, where the animals can deal with them or they might be planted, expecting a very low percentage to make seedlings.

WEEVILS are common throughout the range of American chestnuts, especially in areas where Chinese chestnuts have been planted and their nuts and burs are left to rot on the ground. The insect lays its eggs in the young chestnut flowers and weevils (tiny worms) develop inside the chestnuts and burs. The weevils overwinter in the ground where they emerged from wasted nuts and spent burs to hatch out the following spring and increase destruction of the next nut crop. To control weevils, you make a clean harvest, burn or bury the burs and ruined nuts and encourage your neighbors to do likewise.

PROCESSING & STORAGE

We must assume there may be weevils in the chestnuts, so we give our chestnuts a hot water bath at 120 F for 20 minutes to kill weevils the same day that the nuts come out of the burs. After the hot bath, we put the chestnuts in a cold bath to stop the heat treatment. Once they are cooled down, we pat them dry and spread them on newspapers till they are no longer damp; then we pack them with slightly damp peat moss in plastic bags with a few pin holes for air exchange and send them to growers.

Those chestnuts which we keep to plant in our research plots, we place inside plastic mayonnaise or peanut butter jars in which small holes have been drilled, in a 50/50 mix of sand and peat moss. We bury the jars under about 4 inches of soil with grave markers. In Virginia the chestnuts can be safely stored this way until early February, when many of them will begin sprouting. We have direct-seeded chestnuts in November, December, January and February and have had the best success with January planting.

Growers who do not plant their chestnuts when received, but store them in the refrigerator, should check the bag at least once a week, to be sure the chestnuts are not drying out or getting wet and becoming moldy, then turn the bag onto the other side. It is too easy to forget this chore and let the seed spoil in storage; in this way, very large numbers of seed are lost each year because growers cannot plant when they receive them.

You may notice on the Grower Agreement Form that we will be sending only 10 chestnuts per grower request. Growers who need a larger number for a group project may obtain more by volunteering at harvest, taking your chestnuts in the burs and doing the processing yourselves.

GYPSY MOTH has invaded Giles County. Luckily, only one of our research plots was infested. I first noticed tiny black caterpillars toward the end of May, picked off by hand those within reach on our chestnuts, squashed them and sprayed with Sevin. Their numbers and size increased at an alarming rate. It became necessary to visit the plot at least twice a week, pick them off and stomp them, spray after each rain. While the tall canopy oaks were completely stripped of leaves, followed by nearly all the other hardwoods and understory trees and bushes, our chestnuts thrived in the additional sunlight. The battle to save them lasted about 3 weeks, and we must expect a similar job in this plot in future years. We noticed that the gypsy moth does not eat the leaves of the tulip poplar or cucumber magnolia. This suggests

that plantings located in clearings within solid groves of these species (such as the Pandapas plot below our yard) may be less likely to suffer a gypsy moth attack.

GROWERS REPORT

516 of the American chestnuts I planted are still growing. Among them, 155 are new this year, although 20 of these are not planted on their permanent sites but growing in a yard nursery, for transplant following dormancy this November. These 20 are survivors from a bunch of rejects: they appeared during processing to be in very poor condition, too discolored --suggesting possible mold-- or too dry to send to growers or to the nursery; they are a great example of the benefit of getting the seed right into the ground. In addition to the numbers above, we have at least 3 dozen chestnuts which I did not count because they were planted by the squirrels. My tallest seedling is Pacman E; I am unable to measure it without help. The tallest grown from 2006 nuts are 2 feet. Six of my seedlings are bearing nuts. Losses in our research plots were attributed to voles, root rot or blight.

As of **December 7**, we have received **194 reports**, for a total of **5,027 ACCF chestnuts reported**. These numbers will be updated, as more reports come in.

GRAFTERS REPORT

The past two years I have tried a few topgrafts (whips), choosing stocks among sunny -side branches on blight resistant American chestnuts which are growing in places where a pollinator is distant or lacking. On the down side, because the grafted branches are only 1/4 inch in diameter, the graft is vulnerable to blight. However, these grafts are much easier to execute because you are not lying on the ground and there is nothing to inhibit making the cuts exactly as you want to, so I judged it worth the risk. Two of my new grafts this year are topwork and although they are still alive, their branches could go out this winter. Including these, I have 19 new grafts growing in 4 sites. All but 2 (triangles) are whip grafts. Last winter we lost several big grafts (voles eating the roots) and had the tops blight-killed in several others. Surviving are 105 grafts, divided among 9 sites. The tallest is Thorofare Gap, grafted in our yard in 1991. Forty-one of my grafts bear nuts, and their pollen is improving the potential of the chestnuts harvested in 5 of our breeding orchards.

Yes, indeed, I am bragging a little, hoping to interest some more of you in learning to graft, to improve your own chestnut plantings, like **Harold Pierce** is doing in

Alabama: he has 2 grafts from 2005, one from 2006 and 8 from 2007; all bark grafts into chinquapin, they represent a very nice variety of blight resistant American chestnuts. Health problems prevented **Carl Mayfield** from grafting this year, but he has sent in a wonderful report of 29 grafts surviving from past years; among them are nearly all the American chestnuts of note in our breeding program.

NATHAN PEASE UPDATE

The Nathan nutgraft on which we have been reporting the progress of blight-resistance trials has been killed by a root rot. Another, smaller Nathan nutgraft on a different site is in its second summer with blight. It has 7 burs.

WATERING

The bare-root seedlings from the nursery require one gallon of water each week of drought through their first two growing seasons. For successful planting, it is very important to plan for this. On planting sites where watering may be a problem, it is best to plant smaller numbers and consider starting from nuts instead of seedlings.

Here in Virginia, we often have drought in August, and in some of our plots, also in July and September. So we have been establishing the Pandapas plot, by direct-seeding about 20 per year, with the goal of making a grove of 100 American chestnuts in the National Forest 100 yards down the mountain from our yard. We plant the nuts inside 8-inch tree shelters, sunken a few inches in the ground and surrounded by wire cages to deter raccoons. The small seedlings, less than two feet tall, can survive on a quart of water per week of drought because their roots are equal to the stems and sometimes larger (whereas nursery seedling roots were trimmed at lifting). We remove the short tree shelters after the first growing season.

In Turkey Run, the two research plots are both 100 yards up the mountain from the access road. These plots were originally for grafting, but so many of the native root systems have been weakened or killed, we decided to plant about a dozen seedlings to make up the deficit. Direct-seeding there just provided more food for a large vole population. Therefore, this winter we started nuts in December by the **Moote Method**, in a south-facing window, as follows: using 18-inch tree shelters with newspaper liners, we filled them with a 50/50 mix of damp peat moss & sand, let the fill settle for a day and then press a nut one inch down, lay plastic wrap on

top until the sprouts begin to emerge (about one month), water sparingly, the same as other house plants. In January and February, we dug 2-foot planting holes and put gallon milk jugs full of water, 3 each per hole, inside the cages where animals could not steal the water. During a rainy week in May, we transplanted the 6 to 8-inch tall seedlings. These tiny seedlings also can get by on about a quart of water per week of drought. Watering them in the cool of early morning through the summer heat was made easy, with the supply already on site.

We thank the **National Wild Turkey Federation** for continuing generous support of our cooperative research with the **Virginia Department of Forestry, USDA-Forest Service** and **Virginia Tech**, breeding for blight resistance, establishing and maintaining forest plots of ACCF all-American chestnuts.

SPECIAL THANKS to more OUTSTANDING COOPERATORS:

John B. Bushmann, Ken James, Carl Mayfield, and Violet Pesinkowski, long-term, big supporters of the research for American chestnut restoration.

Philip Latasa once again volunteered several days in the Lesesne last winter, making the work go faster as we moved protection cages, removed tree mats, weeded and treated the soil with gypsum (where we have had root-rot in the past) and prepared new planting holes.

Remmington Bolt also volunteered several days last winter, pruning trees at the Airport and cutting trees at Turkey Run.

These are a few of my favorite things: working outdoors, the company of towhees, bluebirds and indigo buntings, watching chestnuts grow, the green of new leaves unfolding on grafts and seedlings, a complete row of American chestnuts, a fawn springing up from its bed in the tall weeds, a newly mown or completely weeded research plot, hundred-foot tall tulip poplars right next to a chestnut plot, the perfect mornings in March and April when I graft with highest expectations, the moments each year when the last newsletter is in the mail, the last nuts are off to growers, the last orders, to the nursery, and lots of reports about ACCF chestnuts. Thanks again for sending your report.

Respectfully submitted,

Lucille Griffin, Executive Director

Other ACCF Directors

Gary Griffin, President, Professor of Forest Pathology, Virginia Tech

Dave McCurdy, Vice-president, Superintendent, Clements State Tree Nursery, WV

John Rush Elkins, Secretary, Research Chemist, Professor Emeritus of Chemistry, Concord College, WV

William Pilkington, Treasurer, Financial Advisor, Ghent, WV

Ed Greenwell, Director of Tennessee chestnut projects, Electrical Engineer, Cookeville, TN

Dedicated to the restoration of American chestnuts