Dear Friends & Cooperating Growers:

2019 Harvest was plentiful and successful beyond expectations. Volunteers took home many "newly advanced" intercrosses made possible by first flowers and/or catkins on several young grafts or seedlings in both breeding orchards, plus several Airport chestnuts that bloomed twice, early & much later, with abundance provided by open pollination, and in a few cases, both parents known from field notes of the blooming schedule. Processing & distribution of the harvest still need improvement, which we shall outline in June, when I may have some information from your May reports and this subject might be most useful to growers and potential harvest volunteers.

Special thanks to our 2019 volunteer harvesters: from Virginia, Loren Hostetter & Chance Baker; from Maryland, Duane Schmidt & Christine Daily; from North Carolina, Doug Newell, Darin Can, Joe Brackhan & Ryan Wierzbicki; from Ohio, Dick Stoffer & David Johnson; from Pennsylvania, Corry Shaffer & Sarah Bartle with friends Nessie & Micah, Zach Elfers, Jane & Jim Reilly; and from Wisconsin, James Raitmaier who also treated Airport grafts & seedlings with a drench to deter insect damage. Additional thanks to Loren & Corry, experienced tree-climbers who came twice & shook down lots of chestnuts, which otherwise would have been eaten by squirrels, chipmunks, blue jays and crows.

I have some 2019 chestnuts growing indoors. I had misplaced and forgot them following harvest when I planted our yard nurseries. The first few sprouts emerged January 1, a month too early for their 8" tree shelter tubes, carelessly selected because I had not expected any to grow: all had floated for 48 hours before partially submerging or sinking. To improve their survival chances, I purchased at Lowe's two black plastic drainpipes, cut into 18" lengths, plus a 15.5" tall plastic storage container that holds 12 planting tubes erect. I lined each drainpipe section, same as the free tubes, with one wide newspaper sheet (attached front & back pages) rolled up and the bottom folded & stapled shut, then filled each tube with 50/50
mix of damp sand/peat moss, which settled nearly 8 inches before I put my tree shelter tubes on top (with bottoms of their linings opened slightly), thus no more than 10 additional inches extra grow space for the 6 seedlings already started.

They stand here in my office window exposed to SE sun, but for a much briefer spell than in their original place upstairs in our dining room window. A warm-weather break on January 6, permitted digging two 20" holes in our yard, and setting up 4-foot wire protection cages, to have the possibility of early transplant for the two largest seedlings whose roots may have reached their tube bottoms in April. I'll mix some Molemax (to deter rodents) and diatomaceous earth (to deter ants and other insects) in the top 4 inches of the transplant fill. I'll rig double plastic greenhouses, one over each seedling and another over their cages. The other chestnuts will be transplanted after May 15, across 460, down the mountain in the Hotine plot, and up in the Big Field. In June, I'll let you know the number of survivors in each plot.

16 Ways to kill an indoors-started chestnut: 1. Container too shallow; 2. Watering before the sprout emerges; 3. Watering before the surface soil is completely dry; 4. Watering more than once a week or longer, depending upon your indoor environment; 5. Not watering; 6. Fertilizer; 7. Poor transplant site choice; 8. Forgetting to keep one hand under the grow tube when moving it for transplant; 9. Ditto, when placing it into its hole; 10. Planting hole too shallow, not dug 6" deeper than length of the root, the 6" loose soil then replaced just before planting; 11. Forgetting to carefully peel away the top half of newspaper liner while replacing soil in the planting hole and packing it firmly around the transplant; 12. Root injury during transplant; 13. Fill not firmly packed around the transplant; 14. No protection cage; 15. No bright flagging to prevent deer crashes; 16. Failure to harden off seedlings, for at least a week of daily outdoor exposure & nights back indoors, before transplanting.

Winter work that takes you outdoors: 1. Weed & remove leaves inside and around cages, looking for blight at the base of seedlings & probing for rodents. 2. Put Molemax into rodent tunnels. 3. Tie new bright flagging on all cages. 4. Lift rocks and logs near cages, put Molemax under them & replace. 5. Sprinkle Repels-All in and around cages in which you planted chestnuts last fall. 6. Sprinkle zinc sulfate (promotes healing) around the base of injured or blighted seedlings and also around stump sprouts intended for spring grafting. 7. Dig deeper all planting holes where last year's chestnuts failed, removing roots & rocks, replace soil and with
hands pat it down smoothly but not too hard, to be ready to plant or transplant a chestnut there next fall, while leaving no evidence for raccoons to suspect your plan. 8. Mound up soil to cover any cankers at the base of small seedlings and cover with moss to hold the soil in place till summer. 9. Remove dead or dying frees and limbs that shade or could fall on your chestnuts. 10. Look for more good planting places near your established chestnuts and mark them with a flagged stake, to dig the holes later. 11. Walk through nearby woods looking for native chestnuts & mark with bright flagging. Although unlikely to be blight resistant, they promise deep soil, thus, the possibility of making a new chestnut planting, or grafting into a large root system, if you may be able to cut trees to insure early morning sun exposure.

Climate change has been lucky for us Although it is responsible for extensive damage at our airport planting, at the same time it delivered very important information teaching us to avoid flat sites which are liable to frost, late freezes and gusting high winds. Repeated extreme climate stress on the Airport grafts seems to have caused several to adopt a strategy of blooming mice, so we thank climate change for the new open intercrosses harvested in 2019. It has also identified a chestnut with the most outstanding blight-resistant reaction we have ever observed, suggesting more combinations of A4-3 genes with our advanced intercrosses must be made.

I shall never retire, cannot give up the chestnut work. Many of our best cooperators are retired, and like me, happy to be fully engaged with chestnut work. It is the best motivation for staying shape because the long process, starting from nuts to make big chestnut trees, produces a strong attachment that calls us out to the woods and orchards. Among our growers, several youngsters have caught this bug: their chestnut work is overtime, compensated by pleasure in doing the job, maximum outdoor exposure, and dreams of the final product

I used to train for Masters' swim meets, motivated by the thrill and fun of the races plus the chance to chat with friends from all over the country. Now I swim mainly to keep in shape to be able to climb the mountain slopes, as well as, stoop or sit down to do the dirty work that might improve our chestnuts' chances to survive insect, rodent and other animal attacks, and especially, so I may be able to graft into available big root systems for more rapid improvement in the breeding
orchards. Nowadays the chestnut harvest wears me out just like a swimming competition, requiring several days' break to be fully recovered and ready to meet the next harvest group. It is a great pleasure to share our chestnuts and chat with like-minded friends from all over the country. As always, I look forward to your May reports.

Respectfully submitted,

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Dedicated to the restoration of American chestnuts