

**Attached are notes from the December 9<sup>th</sup> conference call taken by Essie Burnworth.**

**Notes from Restoration Conference Call, December 9, 6:00 pm**

Rex began by summarizing the restoration concept that has been evolving over the last 2 years. He said that there are 188-200 million acres available for chestnut restoration in the range -- if the Phytophthora problem was solved, there would be even more. He reported that although originally the idea was to develop a national restoration plan, or template, and then have chapters tailor a plan for themselves, the thinking had changed during 2009.

Now the consensus approach is to have two plans -- a **tactical plan** and a **strategic plan**. The tactical plan will be a national plan including all chapters, and it should be thought of as a "business plan" for the next 25 years. This plan is the focus of the work now with a goal of having a draft tactical plan for review at the April meetings. The strategic plan is more far-reaching and will detail how TACF, in the lead, will bring in all kinds of partners to actually integrate the restoration efforts of the chapters and be a national umbrella overseeing restoration over a longer time frame.

**Tactical Plan** -- The core of the tactical plan is to have a chestnut planting of approximately 200 trees in a 1-acre plot in each of the US Geological Survey's quads within the chestnut range. A quad is about 35K acres, and there are about 7K quads in the range. There are of course different numbers of quads in each state, so the amount of effort envisioned in the plan varies greatly across chapters.

Associated with each planting, there would be a volunteer group to oversee, nurture, and monitor each planting. A given volunteer group could oversee more than one such planting, depending on the circumstances. Nurture means perhaps erecting deer fences and I suppose any soil amendments, but surely less care than we lavish on our breeding orchards. Then the volunteers would be responsible for collecting data, to be specified later, for inclusion in a national TACF database. Presumably, scientists analyzing these data would then draw some conclusions on sources of resistance, planting methods, site characteristics, etc.

Rex envisions this tactical plan to cover 25 years in which we would populate all 7K quads in the range.

Bryan and Rex think that the way to pay for these restoration plantings is through establishing Restoration Branches in each state. A given Branch would "own" one or more of the plantings and would provide the bulk of the volunteer time/resources to protect/oversee the planting and collect the data. As an Aside, Bryan said that he sees Restoration Branches as the framework for much of TACF's financial support and source of new members in the future.

Now, as to what gets planted in the quads. Apparently everyone including Fred says that ultimately, each chapter should be planting the nuts/seedlings from its own seed orchards. I think this is excellent news to have this explicit -- every chapter will focus on developing its own B3F3s or better and planting them in its restoration groves. Now, except for PA, most chapters are not close to having 6th generation or better seeds yet. HOWEVER, Fred has made estimates of the Meadowview seed production and that of PA, and he says that as early as spring 2011, there will be plenty of nuts/seedlings available from Meadowview and PA to offer to chapters to plant in

their restoration plantings. For example, Fred says he will have 10K nuts/seedlings available in spring of 2011 and 36K in 2012 to share. I asked about what would be required to get chapter-grown nuts "certified" or otherwise approved for planting by Fred or some release authority, and the word is if we grew them, they are fine for using in the restoration plantings.

This means that a chapter that had a site negotiated could start with B3F3s instead of pure Americans to begin these plantings. This early availability of 6th generation material means each chapter has to decide whether it wants to use some of these "other" nuts and have more blight-resistant material growing, or begin with Americans and wait until they have nuts from their own seed orchards to plant. Other people on the conference call were mixed about wanting to grow Meadowview nuts or PA nuts until they have their own. I guess different chapters can make different choices, perhaps depending upon how soon their seed orchards will produce.

I repeated the concept that we were following in MD, as Rex had articulated it last year in Chattanooga, that we begin identifying restoration grove sites and we start by planting American nuts to learn what works best in terms of number of nuts, degree of nurture, fencing or not, etc. He agreed that this approach was still OK; what's new in the thinking is that 6th generation material is going to be available to everyone in 2011, so maybe we would want to do our "learning" with that. Also, it may be easier to attract the volunteers to do the work and to establish the Restoration Branches if we can say that we are growing the latest material in these plantings. From Rex's estimates, only a few states would have their own nuts to plant in the next 10 years, so the availability of good nuts from other sources is perhaps an incentive to get these quad plantings started.

Rex also said that the Tactical Plan was to incorporate "adaptive management" meaning that after 4-5 years, the Plan would be re-evaluated and revised to reflect what is happening. This Plan puts the major burden on the Chapters and so more coordination will be required to hold it together as a comprehensive national plan -- the Regional science Coordinators are key to this.

**Chapter Inputs** -- To make a draft Plan by April, Rex needs inputs from the chapters -- facts as well as assumptions about how we will each proceed.

**1. Seed orchard status** -- Rex needs an estimate of when we would produce our own nuts/seedlings for the restoration groves. Since MD will do its first inoculations next spring and has no current plans for the 2 intercross orchards needed to produce seeds for the restoration groves, we are probably 15-20 years away from our own nuts. Perhaps Sara can help us more accurately assess this nut production timeframe. Even though we are not soon going to have seed orchards, there are other chapters that are behind us, so the national Tactical Plan should have a timeline that shows all of us coming to the state of restoration nut production. The long times involved also bring up the possibility of joining with other chapters to have regional intercross and seed orchards -- a concept that Paul Sisco has often promoted.

**2. Quads in MD** -- Some rough overview of the number and location of USGS quads in our state to gauge what our long-term responsibilities will be. In addition we could probably prioritize the prime 2 or 3 such quads that we would want to start with.

This prioritization will allow Rex to put a map together grossly showing how the restoration will progress over the range during the 25 years of the Plan.

**3. Planting site selection** -- There was some discussion of whether individuals or government organizations or NGOs would make the best landowner partners for these restoration plantings. Rex made the point that some states like NC have a lot of state land, so that might be their best bet whereas in Kentucky, Rex thinks there are a lot of individuals who will jump at the chance to host these plantings. There was some discussion of what sort of agreements we will need -- the Germplasm Agreement to start perhaps, but over time, it will lose its authority as nuts are produced in the plantings and there will be no way to control distribution. The main new requirement is that we want to ensure that these quad plantings will be left to grow for "decades." (We hope!) With this time frame, partnerships with individuals is problematic because family situations change -- the die, children sell property, hard times make them sell, etc.

In MD, we have a good start on partnering with govt. (MD DNR, MD SHA, National Capital Park and Planning Commission, MD Boards of Education, Forestry Boards, etc.) and also with MD Chapter of The Nature Conservancy as an NGO, so I would recommend this orientation would remain our main source of partners. We could describe these early starts on restoration for Rex since I think we have generated a lot of interest and enthusiasm even though we were not promising 6th generation or better nuts.

**4. Availability of state nurseries** -- Rex asked us to identify these if they would be willing to grow out our nuts for planting in the quads. Notice I have said nuts/seedlings above because it is not clear which are preferred for planting, or maybe it is up to us. We can mention the nursery on the Eastern Shore and maybe also that Montgomery County nursery that Vince Berg is associated with. Also we have Mac Sloan and his huge greenhouse and high school students in Cumberland who grow out several hundred nuts each year for planting.

**5. Other** -- I think you should send Rex your wonderful "Chestnut Orchards and Plantings Explained" as an overall description of what we are doing in MD. We should also include anything else we think would be germane to developing this Plan. Rex has no outline or form in mind yet. We need to coordinate our inputs though Sara, and she can probably best do our timeline estimate for seed production.

**Strategic Plan** -- The concept of this Plan is to bring in potential partners like USFS, other Federal agencies, state forestry agencies, academic partners, and NGOs like The Nature Conservancy. The idea is that these partners may help us raise money down the line and may help us as new science needs come up, especially in analyzing the vast amount of data that will be collected in the TACF database -- most of these partners have responsibilities for projections and modeling that would complement these data and might help us tweak the Tactical Plan and extend it beyond the 25 year horizon. They are forming a steering committee now to identify and get buy-in from these potential partners.

Rex also said that the breeding program will continue and that probably 6th backcrosses will be made. Also provenance testing and other controlled tests with some of the 6th generation material will be done. It is not at all clear how the results of all the testing and the plantings will be assessed or even digested. I am still

somewhat surprised that Fred does not want more say over the material put into these quad plantings, but we will see.

Please let me know what you think of this. I think it is very positive and I am so glad that Chapters are being recognized and given responsibility for actually starting the restoration. I will be glad to help prepare the inputs for Rex. Let me know how you would like me to help.

Best regards --

Essie