



THE
AMERICAN
CHESTNUT
FOUNDATION



ANNOUNCING

“OPERATION SPRINGBOARD 2008: Restoring the American Chestnut on Mined Land in the Appalachians”

The Appalachian Regional Reforestation Initiative (ARRI) and **The American Chestnut Foundation (TACF)** are looking for volunteer surface mine operators and abandoned mine lands (AML) project planners in each of the seven Appalachian Region coal states willing to participate in the first year of out-plantings to test American chestnut suitability as a forest reclamation species on mine sites.

TACF and the ARRI are partners in an effort to combine reclamation of mine sites with restoration of the American chestnut. Coal mines reclaimed using the **Forestry Reclamation Approach (FRA)** advocated by ARRI offer several advantages for large-scale chestnut re-population. Across the Appalachian Region there are thousands of acres of land mined for coal and reclaimed every year. So, there are numerous sites that can be made suitable for the successful re-introduction of American chestnut trees. These lands can be pioneer sites for the spread of chestnuts from mature trees into the adjacent forest lands, through wildlife activity.

TACF has been working for 25 years to develop a blight resistant chestnut hybrid that will be used to repopulate the eastern forests. Since the hybrids will not be available for widespread distribution for several years, pure American chestnut seed will be used as proxies on mine sites until the hybrid trees are available in large quantities. The year 2008 has been marked as the first year of a long-term effort to use mine sites as “springboards” for returning the American chestnut into the Appalachian forests. “Operation Springboard 2008” will commence with the use of the FRA to prepare rooting medium for trees this fall and winter and finish with the planting of pure American chestnuts in the spring.

Be the first coal operator or AML planner in your state to sign up for the start of this major regional ecological restoration event!

WHY SURFACE MINES? Reforestation experts and university researchers believe that surface mines will make excellent planting sites for re-introducing the American chestnut back into its native range for numerous reasons. The Appalachian coal fields are at the center of the chestnut’s native range. When the FRA is used, trees grow very fast, which means that they can reach reproductive maturity very quickly and their nuts can be carried into

the surrounding forest by animals much sooner. The use of tree-compatible herbaceous cover means that there is much less competition interfering with chestnut seedlings compared to that found on old agricultural fields or clear-cut forests. Finally, scientists suspect that a root rot disease which kills chestnuts might be less aggressive in well-drained mine soils.

WHO IS ELIGIBLE? Any active coal surface mine operation or AML reclamation project in the 7 Appalachian states currently reclaiming mined land to a forest post-mining land use in preparation for the spring 2008 tree planting season is eligible. The mine site must be certified by an ARRI Team Member as FRA compliant as advocated by ARRI. Mine operators should check with the ARRI Team Member from their state regulatory authority to ensure that American chestnuts can be included in the planting mix on their mine site without the requirement of a permit change or amendment.

WHAT WILL BE REQUIRED? Use of the 5 step FRA is required (see below). Mine operators will need to closely follow their permit requirements regarding the species and planting density of native hardwood tree mix, and it is recommended that professional tree planters do the planting. The chestnuts will be interplanted among the other hardwoods at a spacing of 75 feet by 75 feet. This will result in a stocking rate for the chestnuts of 8 nuts or seedlings per acre. Since chestnuts are heavily predated by small mammals, they need to be protected with a tree shelter of some type which needs to be secured with a stake. It is highly recommended that the planting of the chestnuts be done by a team composed of the ARRI Team Members, the mine operator or his designate, the professional tree planter if possible, and a member of the local chapter of TACF if possible. Detailed planting instructions will be issued in advance of the chestnuts and the planting stock will be sent to the ARRI Team Members who will plan and coordinate the planting event(s). Finally, future site accessibility, at least until bond release, is a consideration since it is desirable that yearly measurements be conducted to monitor the success of the planted chestnuts.

WHAT ARE THE 5 STEPS OF THE FRA? The 5 steps of the FRA technique listed below have been confirmed by forestry research. ARRI has determined that the FRA can be implemented under current Federal and State regulations:

- Create a suitable rooting medium for good tree growth that is no less than 4 feet deep and comprised of topsoil, weathered sandstone and/or the best available material
- Loosely grade the topsoil or topsoil substitutes established in step one to create a non-compacted growth medium
- Use native and non-competitive ground covers that are compatible with growing trees
- Plant two types of trees – early succession species for wildlife and soil stability, and commercially valuable crop trees
- Use proper tree planting techniques
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For detailed information about the FRA technique described above go to <http://arri.osm.gov> and click on **FOREST RECLAMATION ADVISORIES** and read the 5 informational documents written by ARRI's Science Team.

WHEN MUST I START? Mine sites must be prepared with the FRA in the fall and winter preceding the spring 2008 planting season. The tree planting season in Appalachia varies from state to state. It starts early in the south (January or February) and later in the north (April or May). The chestnut planting stock will be sent to the ARRI team member prior to the start of your local planting season. This will be a long-term ecological restoration project. Mine operators who can not prepare FRA compliant growth medium for trees for the spring of 2008 can plan for 2009 or the next year.

WHERE WILL THEY BE PLANTED? The following 7 states are ARRI partners: Kentucky, Maryland, Ohio, Pennsylvania, Tennessee, Virginia, and West Virginia. Any active mining or AML operation in these states is eligible as long as the FRA is used.

HOW MUCH WILL IT COST? TACF is a non-profit organization and will need to cover their expenses for Operation Springboard 2008. The costs for the chestnuts should be a minimal amount of the total forestry post mining land use. A donation per nut will be recommended. Further, the nuts will need to be protected by tree shelters and stakes. Corporate membership in TACF is also recommended for participating coal companies (see: <http://www.acf.org>). ARRI Team Members can provide mine operators with detailed information regarding costs.

HOW MANY CHESTNUTS ARE AVAILABLE? The number of pure American chestnuts that will be available will depend upon this fall's harvest. When the harvest is completed, TACF will be able to project the numbers that can be planted in the spring of 2008. However, preliminary harvest information indicates that, despite the extreme drought of 2007, adequate amounts of chestnuts will be available to make Operation Springboard 2008 successful in each state.

HOW WILL THE CHESTNUTS BE DISTRIBUTED ACROSS THE REGION? Each of the 7 states will get a share of the 2007 fall harvest. The number that goes to each state will depend on the harvest and the amount and quality of growth medium prepared in that state in accordance with the FRA. The ARRI Team Members in each State will establish the anticipated need in their particular state based on their assessment of those sites that are FRA compliant.

HOW DISEASE RESISTANT WILL THEY BE? Since TACF's blight resistant hybrids will not be available for widespread distribution for several years, pure American chestnut seed will be used as proxies on mine sites for Operation Springboard 2008. By planting pure stock in 2008 and several subsequent years, valuable information will be obtained regarding planting techniques and site requirements that will be necessary for successful establishment of hybrid chestnuts on reclaimed lands in the near future. Blight resistance in pure American chestnuts is low, but many of the seed may have characteristics which enable them to fend off the blight and survive to reproduction, serving as a valuable part of the tree cover on the site for many years, and contributing to the total number of surviving stems required for bond release.

WHAT OTHER BENEFITS CAN MINE OPERATORS EXPECT? Mine operators who show an early commitment to the FRA and American chestnut restoration can expect to play a prominent role in the establishment of TACF's blight resistant hybrids when they become available in large quantities. Chestnut was once a valuable part of the landscape and celebrated in Appalachian folklore, and the restoration of American chestnut to its former range is an important ecological and social goal.

WHAT FOLLOW UP WILL OCCUR AFTER PLANTING? Seedlings will be measured for height and diameter growth and survival by members of local chapters of TACF on an annual basis to determine which site conditions foster good chestnut growth and survival, so that when the blight resistant hybrids become available, TACF will have critical information that will accelerate the restoration process.

HOW DO I GET STARTED? Contact an ARRI Team Member in your state and indicate your interest in participating in Operation Springboard 2008 or planting chestnuts on mine sites in future years:

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