



**Pennsylvania Chapter of  
The American Chestnut Foundation  
(PA-TACF)  
5-Year Strategic Plan (2008-2013)**

The following strategic plan is a general guide for the major actions of the PA-TACF and a framework of resources needed to complete these actions.

It is recommended that this strategic plan be reviewed and updated every two years by a planning committee and the PA-TACF Executive Board review it each year prior to developing a budget for the following year.

This strategic plan addresses the following major areas:

1. The Mission . . . . . Page 1
2. Research, Breeding, and Science . . . . . Page 1
3. Outreach . . . . . Page 4
4. Organizational and Operations Requirements . . . . .Page 6

In addition, the following pages are included to help summarize the plan

1. Chronological Summary . . . . . Page 8
2. Financial Requirements . . . . . Page 10

**SWOT Analysis**

- **Strengths:** our name, very focused mission, reputation; dedicated and active membership + volunteers; low churn rate (quick growth in 2000 – likely due to good economy; increased amount of planting/breeding – meaningful membership activity); growing techniques (very high survival rates); know how to help other people plant trees better than they’re doing now; very efficient per unit input.
- **Weaknesses:** not able to quickly deliver on people’s desire to plant blight-resistant American chestnuts; difficult message ((we’re close, but not there yet)); may need outside help to clarify and refine our message. Largely a voluntary organization (both strength and weakness); loosely affiliated and flat organization (both strength and weakness); need a population geneticist (recruit Jim Bailey). Other areas where we’re weak on board or active membership?? Philanthropic network. Modest financial budget precludes state chapter from submitting for larger grants.
- **Opportunities:** PA Nut Growers; good partners; Bryan Burhans pushing Restoration Branches and stronger working relationship between national and state chapters. Leveraging genetic material for membership and fundraising. Tap into Marcellus gas companies???. Tie membership recruitment into breeding program.
- **Threats:** economic climate; partners under financial/capacity stress; donors hate that we’re involved with coal companies.

## Mission:

The mission of The Pennsylvania Chapter of the American Chestnut Foundation is to restore the American chestnut tree to its native range within the woodlands of eastern North America.

## Vision:

The members of the Pennsylvania Chapter of The American Chestnut Foundation seek to develop blight-resistant American chestnut trees, via backcross method of breeding, for the restoration of locally adapted breeding populations of the species to the forests of the mid-Atlantic. This mission will emphasize the participation and coordination of our members at state and local levels.

Our mission will be accomplished working through three broad goals: (1) Research (breeding/science); (2) Outreach (education); and (3) Operations (staff, budget, fundraising)

**Goal I: Research, Breeding, Science, and Restoration:** Our primary focus since 1994 is to breed, plant, grow, and create blight-resistant American chestnuts that are adaptable to the mid-Atlantic region. Additional areas of research and breeding are undertaken when findings from research help increase the efficiency of current breeding and planting methods and/or further aid long-term establishment and restoration goals.

There are four major objectives within the scientific realm of PA-TACF:

- A. Regional breeding program
- B. CMS program
- C. American tree germplasm conservation
- D. Restoration

To date, PA-TACFs volunteer growers and partners have planted over 50,000 trees and experiences about 50% overall survival of all trees planted (not including direct inoculation and subsequent roging).

**Objective I.A.: Regional Breeding Program<sup>1</sup>:** Since 1994, PA-TACF has participated in TACF's regional breeding program. The guidelines have been established by the scientific staff of PA-TACF's parent organization, The American Chestnut Foundation. Through a minimum of five planted generations – through the BC3F2 generation -- and creation and distribution of the sixth generation – the BC3F3 generation, PA-TACF has sought to create a minimum of 20 unique, Pennsylvania-derived genetic lines<sup>2</sup> within those sources<sup>3</sup> deemed necessary by the scientific leadership of PA-TACF.

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<sup>1</sup> For a full explanation of the breeding program of The American Chestnut Foundation, please see the article in Volume XIX, Issue 2 of the Journal of The American Chestnut Foundation. On page 55, Dr. Fred Hebard outlines *The Backcross Breeding Program of The American Chestnut Foundation*. The article is available for download online at: <http://www.acf.org/journal.htm>

<sup>2</sup> Here a line is defined as being a cross between a Pennsylvania grown American chestnut tree and an advanced backcross tree (BC3+) derived from TACF's Meadowview Research Farms breeding efforts.

<sup>3</sup> A source is defined as an accumulation of those *LINES* (see above) having been derived from a single Chinese (or other resistant) parent. The regional breeding program currently calls for breeding only within sources.

- PA-TACF has effectively completed the minimum of 20 lines within two Meadowview sources called Clapper and Graves. We continue to track about 36 Clapper backcross orchards:
  - Trees at 10 orchards have been inoculated.
  - Six Clapper lines have been taken to the BC3F2 stage and are represented at the PSU Arboretum. Backups of those lines are planted with other volunteer growers.
- We continue to track about 14 Graves source backcross orchards:
  - One Graves orchard has been inoculated
  - There currently exists no straight Graves BC3F2s derived from the PA-TACF breeding program.
- Additional sources, Douglas and Nanking, have been moved to the BC2 level. There are five orchard locations where these sources have been planted, but only on a limited scale.

The above accomplishments will be continued and refined with the following strategies:

**Strategy I.A.1:** Plant B3F2 seed production orchards within the Clapper and Graves sources

- Inoculate remaining Graves and Clapper lines
- Retain selected BCxs as long as possible

**Strategy I.A.2:** Continue above sources to seed production orchards as specified by TACF (establishment, production)

**Strategy I.A.3:** As new sources are created /identified at TACFs Meadowview research farms, the Board under the advisement of the Science Committee will determine necessity for continuation of lines within other sources.

- Continue small scale breeding of Nanking and Douglas – one to two new lines per year to satisfy grower demand for testing material.

**Strategy I.A.4:** Contingency Plan.

- In the event the current breeding program fails to produce expected results for resistance, the PA Chapter Science Committee will develop a research contingency plan his plan will be developed in conjunction with TACF national.

**Objective I.B: Cytoplasmic Male Sterility (CMS):** CMS is a PA-TACF led backcross breeding program similar to the regional adaptability backcross breeding program of TACF. CMS employs multiple sources of resistance (MSR) within each backcross while taking advantage of cytoplasmic male sterility (CMS)

The purpose of the program is to introduce multiple Asian resistance sources into locally adapted American chestnuts. The breeding strategy employs CMS to minimize labor and expertise requirements. Because the genetic mechanisms of resistance are not yet known, PA-TACF works to steer the CMS program in various directions as new information is gained from various breeding sources.

The PA-TACF Science Committee believes that PA-TACF has enough resistance sources already included in the CMS program and therefore encourages no new sources to be introduced.

To date, as part of the CMS program, PA-TACF has about 26 F1 orchards and 3 BC1 orchards throughout the region.

**Strategy I.B.1:** Complete original CMS program which maintains maternal lines for progeny testing.

- Science Committee will evaluate status of all CMS orchards by fall 2011.
- Evaluate and consolidate CMS material at the Lancaster County Conservancy (LCC) planting/orchard by fall 2016, as is feasible.
  - Inoculate and select for resistance at LCC

Plant harvested BC1F2 seed in a test site with the objective of testing, selecting, and producing BC1F3 product.

**Strategy I.B.2:** Backcross to BC2 stage with regional American pollen, returning seed to pollen source region.

- Continue to use House Rock orchard (B2 seed) to produce pollen.
- Develop method for pollen broadcast and guidelines for how much pollen is required.
- Define where and when to develop CMS material to reach **X** number of regions by **when**.
- Determine further options for existing House Rock resource.

**Note:** convene Science Committee to determine ultimate goal and products of CMS Program from a *Chapter perspective*.

**Objective I.C: American Tree Germplasm/Identification:** This aspect of PA-TACF's research seeks to preserve as much native American chestnut diversity as possible through both *ex situ* and *in situ* conservation practices (though primarily the former). Native stems are lost every year and, with them, possibly novel adaptive complexes. By conserving the germplasm, these complexes can potentially be saved for future use, as necessary.

**Strategy I.C.1:** Capture as much native genetic diversity as possible.

- If new American material is discovered, capture within American Tree Breeding Program and/or CMS program
  - collect seed and plant in native seed orchards
- Identify areas most needed for new genetic material (e.g., Northern Tier and western counties.)
  - Tree Locator Forms program
    - review form for user-friendliness

- distribute/market, collect forms – provide data to The Nature Conservancy for restoration/silvicultural analysis
- refine chestnut identification methodology for morphological and genetic characteristics.

**Objective I.D: (Reintroduction and Restoration – silvicultural focus, progeny tests):** – PA-TACF typically partners with other organizations; provides seed and trees for them to be on the forefront of that research. Let the research drive the funding!

**Strategy I.D.1.** Continue to partner with associates in following areas of research where PA-TACF already participates.

- Silvicultural – Headed by partnership with PSU. Continue to support research through seed production and coordination with professors
- The Nature Conservancy’s (TNC) Ecological Land Unit (ELU): TNC abiotic analysis to both find new chestnut locations and determine best sites for planting.
- Develop and evaluate Chapter Reintroduction Plan (flesh this out).
- Centralized testing of 6<sup>th</sup> generation material.
- Work with national to develop organization-wide restoration plan.

**Strategy I.D.2: Other Research.** Develop cooperatives and partnerships with universities to conduct non-core research and help to distribute data/research findings

- Coordinate with TACF to eliminate duplication of effort
- Involve new partners
- Identify/inventory primary questions that PA-TACF would like to have answered but does not have capacity to answer
  - Develop database of questions.
- Seek academic and funding partners to answer these questions/conduct research (biomass, abiotic influences).
- Reference science committee
- Develop MOU’s
- Cross reference with Outreach/partnerships.
- Inventory all research going on in state
- Phytophthora cinnamomi research
- Biomass plantings
- Mineland reclamation plantings:

**Goal II: Outreach** (membership, public relations, education); PA-TACF will encourage the development of each component of outreach in support of our mission.

**Objective II.A: Membership (and Partners?):** The Chapter will maintain base level and increase to 1500 members in Pennsylvania by 2015 (and key partnerships). We will seek new membership through several methods including personal contacts, topically-related fairs and shows (Ag Progress; Farm Show), and other events as they can be supported.

**Strategy II.A.1:** PA Chapter staff will annually determine mission-critical membership statistics.

- Make inquiry to national for chapter to evaluate Donor Perfect database including possibility of purchase “seat” on database.
- Work with TACF membership coordinator to develop “source code” tracking on membership.
- Review TACF’s renewal cycle, process, and rate of renewal, i.e., “churn rate.”

Supplement state membership strategy based on findings.

**Strategy II.A.2:** Consider direct mailing or other method of reaching new members.

- Look at cost effectiveness of mailing/e-mailing lapsed members in current PA-TACF or TACF database or those non-members with interest in program.

Consider second mailing to organizations with similar missions: Cooperative Extension, District Foresters, Conservation Districts, PALTA members.

**Strategy II.A.3:** Review the need or benefits of establishing a membership committee on the Board or member volunteers.

**Strategy II.A.4:** Contact partners and other environmental organizations to ask for opportunities to print articles in partner newsletters, etc. See strategy II.C.3 below.

**Strategy II.A.5:** Obtain membership email addresses for electronic distribution of info to membership; use address labels, etc.

- Promote use of listserv.
- Confirm e-mail addresses in welcome e-mail
- Work with TACF to obtain with initial membership.

**Strategy II.A.6:** Restoration Branches Events

- Establish oversight committee; committee responsible for developing strategies to implement events, e.g., solicit chair-persons for events
- Obtain attendee contact information
- Follow up with attendees

**Strategy II.A.7:** Recruit growers for CMS and other breeding programs

- Create mailing list and database that reaches growers and potential growers for CMS and other programs.

**Strategy II.A.8:** Promote “impulse membership” (e.g., at Farm Show, Ag Progress)

- Train volunteers to help recruit members (and obtain registration fees + donations) at the event
- Workshop at the PA-TACF Spring Meeting: effectiveness as a TACF representative.

## **Objective II.B: Public Relations/Marketing (media, print, electronic)**

**Strategy II.B.1:** Refine, clarify and develop comprehensive messaging and marketing strategy.

- Tap into free Penn State resources and services, such as PSU students in related fields such as marketing, communications, and web development.
- Recruit board member from PA Outdoor Writers Association.
- Board or staff member attend Outdoor Writers Association meeting.

**Strategy II.B.2:** Update stock packet of printed materials, form letter for prospective growers

**Strategy II.B.2:** Revise press release packet

- Create and retain list of contents

**Strategy II.B.3:** Establish robust web presence

- Review necessity for integration of social networking media with chapter communications and outreach.
- Regularly update Chapter website
- solicit membership (newsletter and listserv) to identify person to who can significantly revise website, determine costs and identify funds for a potential re-organization of the site.

**Strategy II.B.4:** Coordinate national and Chapter level public/media relations.

**Strategy II.B.5:** Revamp TACF display (see also III.B. Equipment and Infrastructure).

### **Objective II.C: Advocacy/Education**

**Strategy II.C.1:** To generate increases in membership and donations, determine best audiences (private woodland owners, Penn State PFS's, hunt clubs, Envirothon network, etc.); events; geographies; and organizations for getting our message out

- Create general brochures for educational centers with orchards on site.
- Seek to speak at ten events annually on AC restoration activities (e.g., Farm Show, PA Forestry Association, PA Environmental Educators, Native Plants in the Landscape, Philly Flower Show, PALTA).

**Strategy II.C.2:** Inventory past education events in which PA-TACF has participated

- Determine how many and which ones PA-TACF wants to continue.

**Strategy II.C.3:** By Fall 2011, ask board to generate list of like-minded groups; contact select list of groups and develop group-specific chestnut article (e.g., Chestnuts for Turkey in NWTf newsletter)

- Also part of Strategy II.A.4 above.

**Strategy II.C.4:** Position TACF as leader in citizen science for forest restoration strategies.

- Develop and implement Restoration ProStaff (RK Mellon grant to Regional Science Coordinators).
- Identify other “citizen science” thought leaders (e.g., Audubon Christmas bird count, Stroud Water Research Center, Eli Sagor at U. Minn, Shorna Broussard at Cornell, etc.)
- PA-TACF involves itself in more than just the creation of a blight-resistant chestnut tree. The methods it employs are on the cutting edge of conservation, restoration and best silvicultural management practices
  - Use this trait as a key to displaying benefits of joining the organization.
  - Partner with the Society of American Foresters (SAF) and other such organizations to establish PA-TACF and/or TACF meetings as locales for accrual of continuing education credits.
- Coordinate with and utilize TACF standards for press-releases and writing
  - This is especially relevant to media relations and Strategy II.C.5 below.

**Strategy II.C.5:** Maintain consistency with TACF’s marketing strategy/messaging.

**Strategy II.C.6:** Coordinate with TACF Education Committee.

**Goal III: Operations:** Day-to-day operations are generally handled by the Chapter office (aka “Leffel Center”) located at the Pennsylvania State University. Staff and much essential equipment (storage, planting, electronic, etc.) are housed by the office. As such, the Leffel Center is to act as a central unit to which members may turn for information, advice, and many other membership benefits.

### **Objective III.A: Staff**

**Strategy III.A.1:** Determine staff needs for next 2-5 years, e.g.,

- Achieve full-time Chapter administrative support by 2012.
- Maintain Regional Science Coordinator position and maintain 70/30 (national/chapter) funding split through 2013. ,
- Raise funding for and support at least one summer intern annually.
- Clarify and revise staff position descriptions to reflect Strategic Plan goals and objectives.
- Explore sources of volunteers (VISTA, PCC, AmeriCorps)
- Fundraising – see fundraising section;

**Strategy III.A.2:** Determine training needs and costs for each staff member

**Strategy III.A.3:** Identify data and reporting gaps in communication between staff and board.



- Administrative staff will keep information for the Board of Directors and general membership with regard to and follow-up action items, grant updates, general information, and the ability to forward questions/comments to appropriate individuals/groups.

Staff and board will identify information and data gaps (e.g., membership information from National; reports from National committees and meetings) and determine best methods for disseminating this information to board and membership.

### **Objective III.B: Equipment and Infrastructure**

#### **Strategy III.B.1: Computer needs**

- As technology advances, the Chapter will have a need to update both hardware and software. Staff will need to keep abreast of necessary equipment
- In addition to staff technology needs, the Chapter should continue upkeep and maintenance of its presentation equipment.

**Strategy III.B.2:** Establish and maintain PA-TACF resource needs/wish list including short and long term capital needs

### **Objective III.C: Board**

**Strategy III.C.1:** Determine and clarify administrative relationship between PA-TACF and TACF national

**Strategy III.C.2:** Review and consider establishing three board committees along lines of the three goals outlined here: Science/Research; Outreach; and Operations.

- These committees would then oversee and supervise the goals and achievements of each of those sections of PA-TACF organization.
- Establish grower/supply committee.

**Strategy III.C.3:** Consider establishing wood products industry representation on PA-TACF Board and recommend same to TACF Board.

**Strategy III.C.4:** Update the Board Handbook; integrate policies and procedures manual and bylaws

- Seek assistance from TACF
- Continue to support board with up-to-date information and materials (brochures, press releases, business cards, etc).
- Incorporate TACF policies and procedures manual into Chapter Board handbook.

**Strategy III.C.5:** Evaluate other environmental non-governmental organizations (ENGO) structures, methods, processes for efficiency and ideas.

- Revisit the possibility of joining Pennsylvania Association of Nonprofit Organizations (PANO) or other non-profit association for a trial year.

### **Objective III.D: Fundraising**

**Strategy III.D.1:** Develop fundraising needs and strategy based on Strategic Plan and budget (below); establish yearly income goals. Include:

- Identify and inventory funding needs in Strategic Plan; use inventory to develop fundraising goals.
- Attracting and retaining high level individual donors
- Funding Strategy for public and private entities
- Events (???)
- Development of a tree registry: allow people to "buy" a tree in their name or the name of someone else as a gift. (Such as paying to name a star after you). We could still control where the trees are actually planted but the person would get a certificate along with GPS coordinates or something that tells them where their tree is planted.

**Strategy III.D.2:** Evaluate feasibility of hiring a contract grant writer for 6-12 months.

### **Objective III.E: Budget**

**Strategy III.E.1:** Based on advanced draft of strategic plan, establish 2- and 5-year budgets based on content of strategic plan

# PA-TACF Strategic Plan (2008 – 2013)

## Chronologic Summary

### **YEAR 2008**

#### ***Goal I Research and Breeding:***

- Inoculate and select BC3s
- Hand-pollinate selected BC3s and plan BC3F2s at PSU Arboretum
- Hand-pollinate CMS F1s in at least 2 under or non-represented counties
  - Collect open-pollinated American seed from similar areas
- Rogue male-fertile F1s in CMS orchards that are flowering
  - Collect first CMS B1 seeds and start orchards
- Scientific review of CMS program and creation of contingency plan for TACF materials
- Continue biomass initiative

#### ***Goal II: Outreach :***

- Make website updating a priority
  - Establish connections for revision of website content/organization
- Conduct research related to methods of increasing and retaining membership
  - Establish churn rate of membership
  - Goal to reach membership mark of 1000 members by 2009.
- Generate list of groups with publication in which PA-TACF may publish chestnut-breeding related articles.
- Direct-mail campaign to forestry-related governmental organizations in Pennsylvania (DCNR, Cooperative Extension, etc.)
- Research novel marketing, public relations and public education strategies and opportunities.
  - Provide costs to Board associated with each proposed initiative for use in Chapter budgeting process

#### ***Goal III: Operations:***

- Inquiry to TACF regarding establishment of “Industry Representative” to either TACF and/or PA-TACF Board
  - Contact possible candidates for that position
- Update Board handbook by first Board meeting of 2008.
- Determine staff, training, and communication needs for years 2-5
- Identify equipment needed for years 2-5
  - Evaluate status of current staff and outreach computer equipment
- Establish fundraising goals and or required staff associated with each strategy.

### **YEAR 2009**

#### ***Goal I Research and Breeding***

- Establish Graves BC3F2 orchard with fencing
- Inoculate and select BC3s

- Hand-pollinate selected Clapper BC3s and plant BC3F2s at PSU Arboretum
- Hand-pollinate selected Graves BC3s
- Hand-pollinate CMS F1s in at least 2 under or non-represented counties
  - Collect open-pollinated American seed from similar areas
- Establish two-three CMS BC1 orchards
- Rogue male-fertile F1s in CMS orchards that are flowering
  - Collect first open-pollinated CMS B1

**Goal II Outreach:**

- Develop marketing, public relations, and education materials/programs as identified by research in 2008.
- Continue list of partners with which to publicize through written articles
- Launch new website
- Print new chapter or orchard materials, etc
- Start initiative to increase membership by 10%

**Goal III: Operations:**

- Hire any additional staff and/or bring current part-time staff to full-time as identified in 2008.
- Re-evaluate staff and presentation electronics for modernity and assess needs for upgrades.

## **YEARS 2010-2013**

**Goal I Research and Breeding**

- Establish Graves BC3F2 orchard with fencing
- Inoculate and select BC3s
- Hand-pollinate selected Clapper BC3s and plant BC3F2s at PSU Arboretum
- Hand-pollinate selected Graves BC3s
- Hand-pollinate CMS F1s in at least 2 under or non-represented counties
  - Collect open-pollinated American seed from similar areas
- Continue planting at CMS BC1 orchards
  - Establish new orchards as new sources begin to flower
- Rogue male-fertile F1s in CMS orchards that are flowering

**Goal II Outreach:**

- Continue to reach underserved areas.
- Build presence in more urban areas of the state.
  - Establish urban initiative
- Build on partnerships.

**Goal III Operations:**

- Continue capacity building,
- Establish long-range financial stability within organization
- Establish PA-TACF endowment.

**PA-TACF Strategic Plan 2008 - 2013**  
**Financial Requirements Summary**

**Year 2008 Estimates**

Breeding Program	\$5,000
Office Expenses	\$5,000
Computer Hardware and Software	\$4,000
Personnel Expenses	<b>\$39,000</b>
Breeding Prgm Coord.	\$18,000
Admin. Assistant	\$13,000
Summer Interns (x2)	\$8,000
Travel	\$5,500
Outreach Expenses	\$4,000
Meeting/Misc Expenses	\$2,000
<b>TOTAL</b>	<b>\$62,500</b>

**Year 2009 Estimates**

Breeding Program	\$15,000
Office Expenses	\$5000
Computer Hardware and Software	\$2000
Personnel Expenses	<b>\$52,000</b>
Breeding Prgm Coord.	\$18000
Admin. Assistant	\$26000
Summer Interns (x2)	\$8000
Travel	\$5500
Outreach Expenses	\$2000
Meeting Expenses	\$2000
<b>TOTAL</b>	<b>\$83,500</b>

**Year 2010 through 2013 Expenses (per year)**

Breeding Program	\$5000
Office Expenses	\$5000
Computer Hardware and Software	\$2000
Personnel Expenses	<b>\$52,000</b>
Breeding Prgm Coord.	\$18000
Admin. Assistant	\$26000
Summer Interns (x2)	\$8000
Travel	\$5500
Outreach Expenses	\$2000
Meeting Expenses	\$2000
<b>TOTAL</b>	<b>\$73,500</b>