



THE  
AMERICAN  
CHESTNUT  
FOUNDATION®

## 2017-2027 STRATEGIC PLAN





## The American Chestnut Foundation

Our **Vision** is a robust eastern forest restored to its splendor.

Our **Mission** is to return the iconic American chestnut to its native range.

### The American Chestnut Foundation Core Values:

OPTIMISM

PATIENCE

SCIENCE-BASED DECISIONS

INNOVATION

INTEGRITY

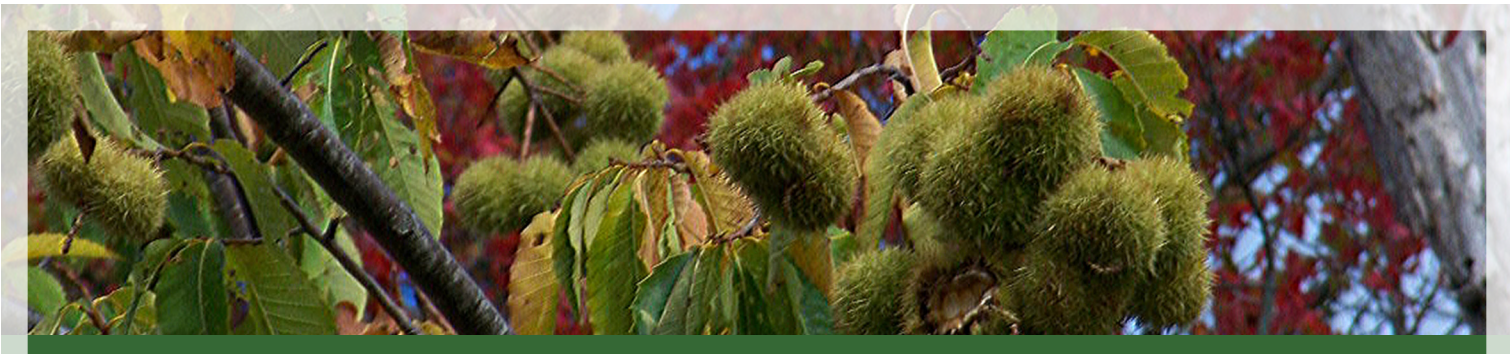
COLLABORATION

Adopted by TACF Board of Directors, these core values are organizational guidelines to ensure the mission to restore the American chestnut to the Eastern forests is a success.

Because this mission involves a long journey and is the most complex rescue effort of any plant species ever undertaken, the organization will persevere with **patience** and **optimism**.

To accomplish its goals, TACF will make **science-based decisions** with the **integrity** necessary to evaluate its work and represent it to the public with transparency. Because of these ambitious goals and ever changing science, TACF must continually **innovate** and **collaborate** with its key stakeholders and overall constituency to remain open to new technologies and ideas.





## Why the American Chestnut?

by Michael Doochin

When Europeans arrived in eastern North America, they found a seemingly inexhaustible treasure in our land and its forests and wildlife. Since then, the primeval majesty of that landscape has been compromised, with many of its key forest species now in severe decline. There is no more suitable metaphor for that lost Eden than the distinctive American chestnut tree that was destroyed by an imported fungal blight early in the last century. The loss of this tree was catastrophic. With its demise, a dominant feature of the earlier forest was gone. And now there are few people alive who remember the living tree. Thankfully, an ambitious effort to preserve the original character of the American forest is underway through the rescue of the American chestnut tree, the energetic anchor in a range so vast it stretched from Maine through Mississippi.

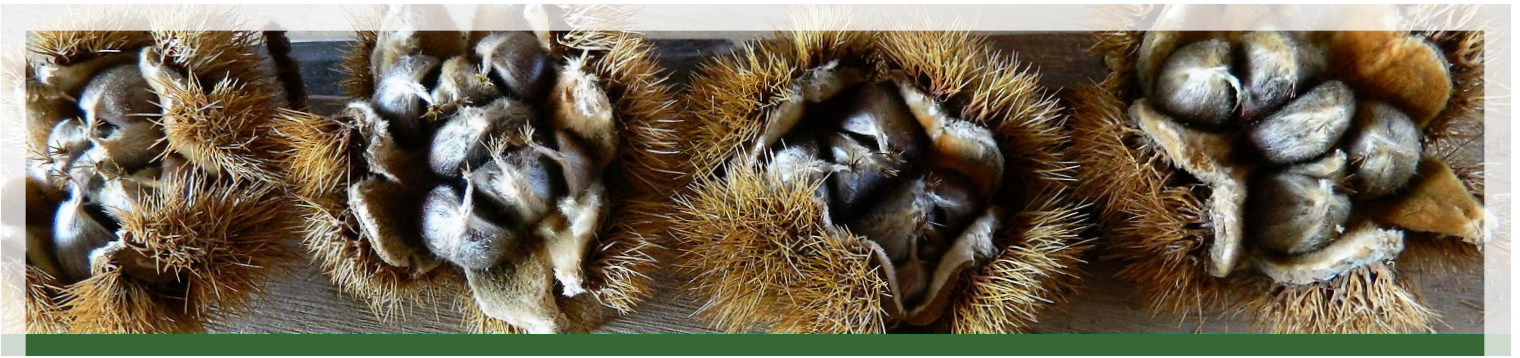
As its name implies, our country's chestnut tree was uniquely American, playing a central role in the ecology, economy, and culture of Appalachia and adjoining regions. A dominant species and competitive in multiple environments, it sometimes reached enormous sizes. Because of its rot resistance, chestnut barns and homes have endured for decades. Its use for tannin supported an entire industry. Its wild-collected nuts, sold and distributed into big-city markets, were an important cash crop in rural areas. Since the demise of the American chestnut also spanned the Great Depression, the loss of this invaluable food resource, with its nutritious nuts for humans and wildlife alike, was a particularly devastating tragedy.

Just as the tree's history and the stories that surround it are remarkable, so is its future. Unlike many other species, the chestnut tree is able to grow on an estimated one million acres of scarified land that has been abandoned after surface mining. Because of its size, rapid growth, long life, and decay resistance, if the chestnut were returned to its former ecological role it could contribute substantially to carbon sequestration. The food available to humans and wildlife from a mature American chestnut tree is 3 to 5 times more abundant, and much more nutritious, as that from oak trees of a comparable size. When restored, its prolific nut production may help take wildlife pressure off existing crops. The restoration of this American icon is a key to restoration of the ecosystem of our temperate forests, long-term sustainability, the struggle against global climate change, and an enhanced quality of life along its range.

The chestnut is a paradigm for the hope that exists for all threatened species. The American Chestnut Foundation (TACF) has played the lead role in rescuing the American chestnut through its innovative breeding and genetics research for more than three decades. Our long-term goal is for nature to take over and create self-sustaining populations, with blight resistant trees growing stronger with each succeeding generation. More than just preventing environmental destruction, TACF is restoring a natural legacy for our grandchildren. And, perhaps that gift will propel them to become stewards of a better world.

*Michael Doochin*

Michael Doochin, Chair, Board of Directors



## Why Strategic Planning?

by Lisa Thomson

The key strengths of The American Chestnut Foundation lie in the diversity and passion of its vast constituency – its chapters, volunteers, board members, donors and research partners. Its mission was built on the groundbreaking work of our founders in a bold and courageous effort to bring back a functionally extinct species, with no guaranteed outcome. Yet the hope of restoring this iconic tree has kept us hard at work. Its staff and volunteers have planted, hand-pollinated, and inoculated tens of thousands of chestnuts in more than 500 breeding orchards on public and private land.

We deeply appreciate this decades-long progress in the breeding programs, and are grateful that new scientific developments will radically accelerate our work. With genetic mapping, we will identify markers for blight resistance and improve the accuracy with which superior trees are forwarded for further field-testing. The State University of New York, College of Environmental Science and Forestry program's research, supported by its state chapter to produce blight resistant transgenic trees, is also yielding promising results. This transgenic tree is expected to be available in a matter of a few years, pending regulatory registration. Advances in restoration ecology and other genomic engineering developments will build on and complement this work as we seek to reintroduce American chestnut trees to the forest. TACF welcomes an increasingly integrated approach, with the best available scientific and research innovations, to ensure mission success.

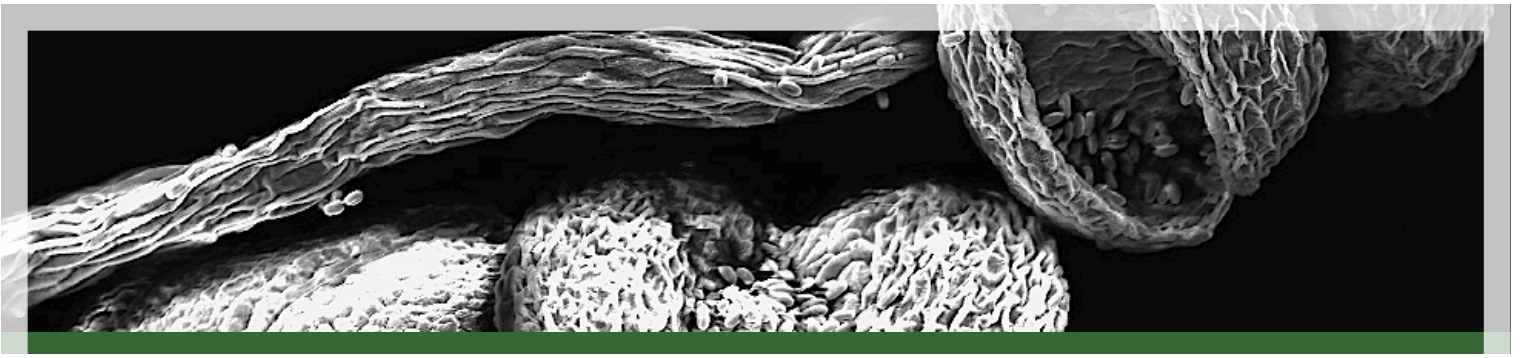
This strategic plan is designed to focus efforts on that integration. It will be a living document, with a strong implementation in four areas: Science and Technology, Restoration, Promotion and Outreach, and Organizational Advancement. It will help us make more informed decisions and set clear priorities for future work. With an ambitious 10-year timeframe, we will adjust our strategies as new technologies emerge.

We hope you will join with us to embrace these advancements through collaborative and philanthropic efforts aimed at restoring the American chestnut. The following goals and strategies will be adapted in light of what we learn, what financial resources we have available, and the unique talents and interests of our collective human resources. We look forward to sharing this exciting journey with you.

*Lisa Thomson*

Lisa Thomson, President and CEO





## Science and Technology

Successful restoration of the American chestnut across its former range requires the development of a population of genetically diverse American chestnuts that are resistant to at least two imported pathogens, *Cryphonectria parasitica* (chestnut blight) and *Phytophthora cinnamoni* (ink or root rot disease). While TACF is encouraged by the progress of its traditional backcross breeding program, and the large-scale volunteer engagement it created, it is committed to incorporating the rapidly advancing knowledge and capabilities of the biological sciences and the techniques of modern biotechnology to achieve this goal. To ensure that TACF's science programs are aligned with its goals and mission, TACF regularly evaluates its programs internally, and also periodically conducts comprehensive external peer reviews.

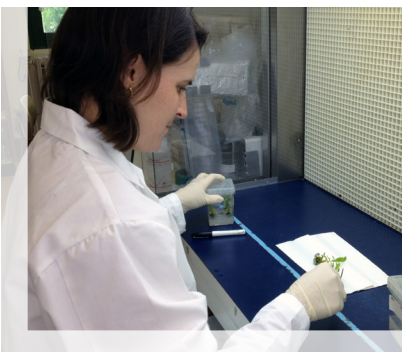
Since its inception, TACF has pursued several different major paths to restore the American chestnut ([Appendix A](#).) These have included the backcross breeding program, biotechnology, and hypovirulence.

The backcross breeding program uses traditional plant breeding techniques to move genes for pathogen resistance from resistant chestnut species into American chestnuts. It has been implemented by TACF at its research farm in Meadowview, VA, and at orchards planted by sixteen different state chapters. The backcross breeding program is focused on identifying both blight and root rot resistance, and incorporates genome mapping and marker assisted selection to further refine and identify its most disease resistant trees suitable for large-scale restoration.

The biotechnology program has developed under the auspices of the State University of New York, College of Environmental Science and Forestry (SUNY-ESF) and the New York Chapter of TACF. In this program, individual genes are tested for their ability to enhance pathogen resistance in American chestnut using the tools of genetic engineering and molecular biology. Through this search, a gene has been found and incorporated into American chestnut that enhances blight resistance significantly.

Hypovirulence is a persistent viral infection of the blight fungus that reduces its virulence, and has resulted in the biological control of chestnut blight in several regions of the world. Hypovirulence and future biological controls may best be used when combined with the increased resistance afforded by the breeding and biotechnology advances.

These programs are now reaching such a point of maturation that TACF is integrating them to shorten the time to achieve a population of trees of regeneration with the form and function of the original American chestnut for restoration.

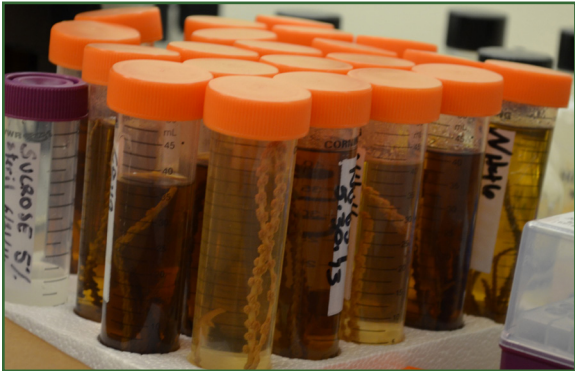






**Science and Technology Cont.**

GOAL	STRATEGY
1. Develop a population of genetically diverse American chestnut trees resistant to chestnut blight and ink disease.	1.1. Encourage and support the development of fundamental genetic information about American chestnut and chestnut resistance to blight and ink disease. 1.2. Use advances in biotechnology and knowledge to increase the accuracy, efficiency, and cost effectiveness of TACF’s programs to develop disease resistant American chestnuts. 1.3. Work to further the use of genomics and genetic engineering in TACF’s mission. 1.4. Ensure that TACF’s programs for the development of trees for the restoration of American chestnut are based on the best available scientific information, use efficient technologies for production, and are responsive to new findings and techniques. 1.5. Monitor and support basic research on the use and efficacy of bio controls, such as hypovirulence, in controlling blight and ink disease.

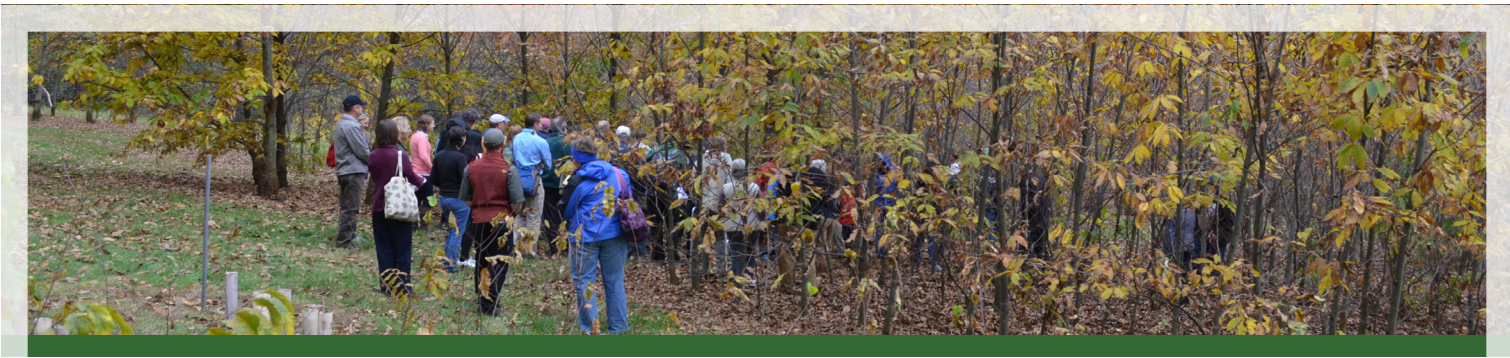


**Restoration**

Restoration will be accomplished when the American chestnut can continuously and sustainably evolve in the wild to reassume its former ecological role. TACF’s goal is to reestablish the American chestnut’s function in its native range.

The work-to-date (science and technology) will eventually progress into broad-scale production and ultimately natural regeneration. Our goal is to create viable plantings of trees that can spread naturally or with human help, each with the genetic variability necessary for long-term success under natural selection. This section sets goals and strategies explaining how the existing resources will be used in preparation for seedling and nut production at the level our developed science and proven silvicultural practices allow. Restoration will involve increasing seedling and nut production at a large scale and will be a broadly cooperative venture. Partnerships are necessary across a variety of public and private entities, in full cooperation and coordination with the existing strong chapter, volunteer, and donor base.





## Restoration Cont.

GOAL	STRATEGY
1. Science staff and board members collaborate with skilled and committed volunteers to create regional American chestnut restoration plans.	1.1. Provide chapter members with an outline and guidelines for developing regional restoration committees. 1.2. Create detailed maps of areas suitable for American chestnut restoration in each state. 1.3. Determine possible sources for seeds and seedlings to be used, when they may be available, and which nurseries would produce them. 1.4. Identify and begin working with possible cooperators to locate, establish, and maintain silvicultural, reintroduction, and restoration trials, and restoration plantings.
2. Use TACF restoration planting protocol and “Best Management Practices” with adaptations for regional differences in restoration plantings.	2.1. Use the current available science for decision support and “adaptive management” adjusted as needed. 2.2. Develop planting, monitoring, and reporting protocols for silvicultural, reintroduction, and restoration trials and plantings. Develop consistent monitoring protocol. 2.3. Conduct training sessions as needed for committed volunteers. 2.4. Encourage consistent reporting of data to central repository via database.
3. Establish disease-resistant chestnut stands for seed production.	3.1. Develop adequate planting-stock production methods.
4. Source wild American chestnut germplasm throughout the native range.	4.1. Develop clone banks and live-tree networks (a/k/a “germplasm conservation orchards” or “mother tree orchards”) across chestnut’s native range. 4.2. Identify and protect populations of American chestnut in natural forests, focusing on areas containing the greatest diversity.
5. Identify and encourage mission-critical research	5.1. TACF Restoration and Science Oversight Committees will identify research priorities needed for mission success.







## Promotion and Outreach

The promotion and outreach strategy is a comprehensive approach to develop TACF into a more externally focused organization in which fundraising and marketing are core functions. It will catapult TACF to become an organization with the scale and strategy required for success. Efficient outreach to current and future donors, increased social media presence, and the maturation of the education program will complement and promote efforts and achievements in science and restoration.

The product of our work, disease-resistant American chestnut populations, anticipates new technological advances that will require consistent funding in order to maintain pace with those innovations. We must move quickly to identify and cultivate our current donors, future prospects, and key stakeholders who are committed and invested in the restoration of this species and reach out to those audiences who may not know the compelling story of its comeback. These audiences include younger generations who will be reached by targeted educational leaders, social media platforms, and outreach to the public to ensure continued success.

GOAL	STRATEGY
<p>1. Fundraising and marketing is a core function of the organization, represented by a comprehensive, consolidated strategy that incorporates all operating arms of national, Meadowview and the state chapters.</p>	<p>1.1. Define the product, process, and outcome that we seek to achieve.            1.2. Develop a specific strategy for targeting and growing major stakeholder groups and specific audiences.            1.3. Develop a revenue strategy for each major stakeholder group and specific audience.            1.4. Develop promotional strategies that target specific stakeholder groups and audiences to improve response by using the most effective message.            1.5. Benchmark all efforts against industry best practices.            1.6. Develop a specific fundraising campaign strategy.            1.7. Prepare TACF for a 3rd Party Due Diligence process to support its increased fundraising effort.</p>
<p>2. TACF has an Educational Program (Outreach and Marketing) that describes and promotes the Foundation’s vision and mission and that markets TACF goals in support of its fundraising efforts.</p>	<p>2.1. Pursue educational programs at arboreta by expanding ArbNet and key centers for environmental education. Focus on outreach that maximizes the number of people reached per dollar.            2.2. Promote the public understanding of our mission by developing partnerships with middle and high school science teachers.            2.3. Investigate a greater virtual presence to appeal to younger audiences who get most of their information online.            2.4. Determine best group cultivation strategies and awareness campaigns to bring in new members and donors. This includes but is not limited to examining annual meeting structures and exploring new high leverage ways to communicate with our constituency.            2.5. Support efforts to increase the membership and donor base, particularly for major gifts (both outright and deferred).</p>





## Organizational Advancement

The effectiveness of an organization is based on how well its parts function individually and as an integrated unit. The American Chestnut Foundation is a strong, multi-faceted non-profit organization comprising a board of directors and committees, professional and scientific staff, volunteers, members, partners, and donors. These organizational constituents and ambassadors depend on each other for clear and consistent communication, sharing of resources and technology, and building from existing and future collaborative efforts toward a shared mission and vision. TACF is committed to advancing the efficient and effective function of each of these entities, individually and collectively, and to the overall advancement of the Foundation as a whole. TACF also recognizes that its current structure may require reorganization as the Foundation grows and evolves.

National TACF will work with chapters in a collaborative process to streamline administrative operations, and to develop an action plan for the existing chapter-sponsored orchards. Along with the board and its working committees, we will ensure consistency of messages and communication across chapter and regional boundaries. This coordination will enhance the effectiveness of TACF and prepare all entities for the challenging work ahead.



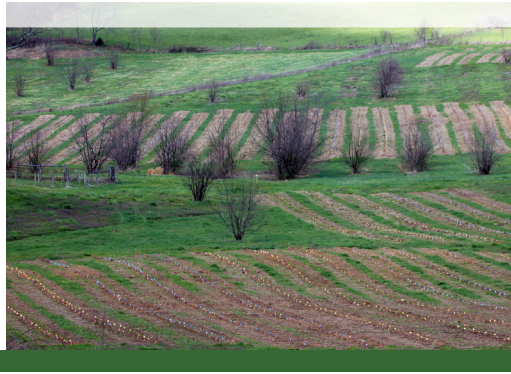
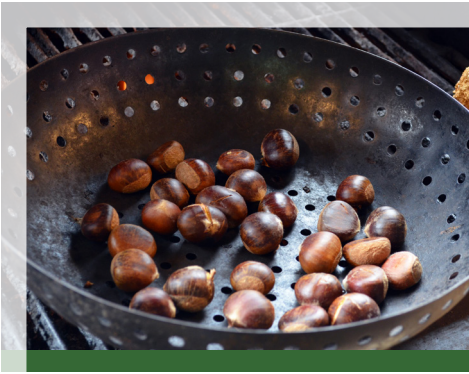




## Organizational Advancement Cont.

GOAL	STRATEGY
<p>1. Encourage and coordinate collaboration, innovation and exploration of new scientific approaches and processes among the organizational entities.</p>	<p>1.1. Aggressively seek new partnerships and respective sources of funding with cutting-edge academic institutions, public agencies, and private technology firms.</p> <p>1.2. Share TACF national and chapter initiatives with each other and with the board.</p>
<p>2. TACF staff provide necessary administrative services (e.g., financial) to merged state chapters as well as other chapters.</p>	<p>2.1. National administrative staff to work with affiliated chapters to explore merger potential.</p> <p>2.2. Launch, test, and continually maintain the revised TACF website.</p>
<p>3. All TACF National staff and chapter leadership remain responsive, diverse, and flexible in all aspects of operations, administration, and communication, with safety and wellbeing emphasized as the core of all actions.</p>	<p>3.1. Conduct a periodic assessment through a scorecard, 360 feedback, or similar instrument across all entities of TACF.</p> <p>3.2. Maintain and strengthen a talent retention strategy to ensure we recruit and retain the best possible staff members. Use strong performance criteria when recruiting and retaining staff and volunteer leaders.</p> <p>3.3. Monitor and evaluate implementation of this strategic plan.</p> <p>3.4. Develop new field safety standards at Meadowview and disseminate to chapters.</p>
<p>4. An incrementally stronger and more diverse board is effective in all aspects of TACF science, business, operations, and development.</p>	<p>4.1. The full TACF board of directors prepares for a significant and comprehensive capital campaign to achieve the strategies, actions, and outcomes identified in this strategic plan.</p> <p>4.2. As vacancies occur on the TACF board of directors, the Executive and Governance Committees will assess the range and identify gaps of skills, knowledge, and expertise of the existing board.</p>
<p>5. TACF maintains its fiscal responsibility and leverages resources to the extent appropriate and possible.</p>	<p>5.1. TACF staff and board of directors prepare three-year budget projections, anticipating all aspects of operations and growth, identifying financial needs for research, restoration, promotion and outreach.</p> <p>5.2. To the extent possible, partners are sought to collaborate and contribute to mutual successes while leveraging financial resources of both parties.</p>





## Next Steps

This strategic plan for The American Chestnut Foundation will guide all aspects of Foundation work. Actions for each strategy are identified in an accompanying implementation plan, to be used as guidelines for development of annual work plans for TACF staff, the board and its committees, and state chapters. The actions will be evaluated through annual reviews of progress, challenges, and completions. Annual accomplishments will be broadly shared at national, regional and chapter meetings and other communication methods, using as many quantifiable metrics as possible. As adjustments are needed due to changed conditions, this strategic plan and its associated documents may be amended through the 10-year planning horizon.

## Acknowledgements and Timeline

The American Chestnut Foundation was profoundly shaped in the development of this strategic plan. The process invited important dialogue, honest assessment, and significant points of disagreement and convergence. The result is a refreshed clarity of focus and a working document to be assessed annually for accountability and future program guidance.

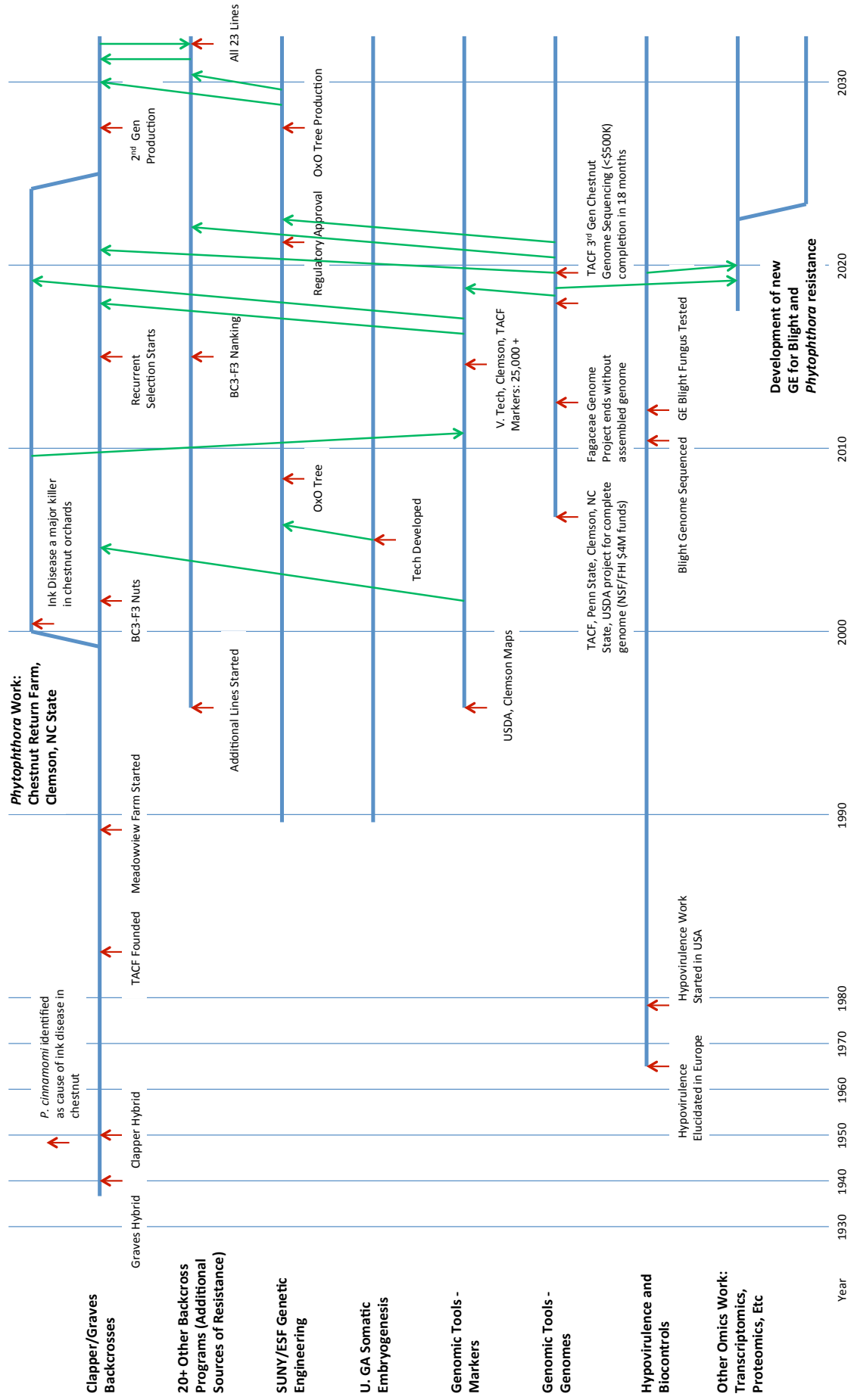
In the fall of 2015, a “Tiger Team” led by Penny Firth helped design the overall structure of the plan in a strategic framework. That team surveyed the TACF board, staff, and committee members, Chapter presidents, and emeritus/honorary members to assess the strengths, weaknesses, opportunities and threats facing TACF, and sought input into the vision and mission of TACF going forward.

The process continued in February 2016 with the commission of a strategic planning team comprised of active TACF members with diverse skills, interests, and experiences. This team led by board member Lewis Lobdell and facilitated by Nancy Walters, an independent consultant, contributed countless hours in the exploration of TACF’s past, present, and future. Team members included Steve Barilovits, Jay Cude, Michael Doochin, Penny Firth, Sara Fitzsimmons, Lynn Garrison, Lewis Lobdell, Kim Steiner, Lisa Thomson, and Barb Tormoehlen. Bill MacDonald, Cathy Mayes, Brian McCarthy, Jay Mills, Allen Nichols, and Don Willeke were consulted periodically to engage in specific topics and to review drafts. The plan was thoroughly discussed and revised by members of the TACF board at various intervals and approved in April 2017. We are grateful for the deep engagement and hard work of the talented individuals who contributed to this plan so the critical mission of the Foundation will flourish in years to come.



# Appendix A

## TACF Science & Technology Roadmap











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