

Northeast Timber Growing Contest

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The Northeast Timber Growing Contest is a component of
Restore NY Woodlands
An initiative of the
New York Forest Owners Association



Coordinated by
New York Forest Owner's Association
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Acknowledgments

The Northeast Timber Growing Contest was developed by Dean Faklis and Peter Smallidge. Helpful technical comments were provided by Ron Frisbee, CCE-Greene, and Dave Skeval, CCE-Onondaga.

We are grateful to the many woodland owners and forest industry professionals who reviewed and helped refine the contest.

Judges for 2013 include Dean Faklis, Ron Frisbee, Ed Neuhauser, Dave Skeval, and Peter Smallidge.

Background

The Northeast Timber Contest grew from a recognition that many forest owners take pride and see value in growing the best quality trees possible on their property. As described below, the contest provides a friendly opportunity to encourage, reward, and recognize these owners. Growing nice timber is one component of restoring New York's woodlands (or the state of the contestant) because it reflects success in controlling deer impacts, reducing interfering vegetation, and practicing good silviculture.

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Goal

To improve the long-term productivity and health of small private woodlands in the northeastern forest through the engagement of landowners and forestry professionals in a process that includes education, research, technology transfer, and friendly competition.

Objectives

- To acquaint private woodland owners with the knowledge and skills needed to grow high quality timber and forest products.
- To increase the growth rate of high quality timber and wood products on private woodlands.
- To enhance the regeneration of the northeastern forest.
- To educate and motivate landowners to improve the productivity and quality of their woodlands.
- To bring together woodland owners and forestry professionals to help ensure a greater degree of mutual education and technology transfer.
- To develop and implement new technologies for growing and managing timber, which are appropriate for small woodlots.
- To create a perpetual focal point for landowners that envisions involvement from multiple generations within their families.
- To provide a new mechanism to strengthen peer-to-peer relationships between landowners.
- To offer a platform from which to inform and educate the public on the importance of growing quality timber in the northeastern forest.

Approach

- Employ the concepts of challenge, friendly competition and cooperation to focus on improving woodlands over the long term.
- Develop a set of rules for a timber contest that helps meet the goals and objectives.
- Develop a series of metrics for determining winning entries at predetermined time intervals.
- Create a body from the community of laypersons and professionals to administer the contest.

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This body should be term limited to help it retain freshness on periods that may span many decades.

- Use social media for education, relationship building, technology transfer, and motivation.
- Build the structure to involve and incentivize young people.

Frequently Asked Questions

Why should I participate in the timber contest?

It's fun! Challenges are a way to focus the mind to achieve a desirable outcome. Being in your woods with your family in all four seasons is rewarding and increasing the volume and quality of timber in your woodlands increases the value of your asset. Your forest is part of your legacy and you'll want to leave your heirs or future owners with healthy and productive timberland. In the bigger picture, private landowners play a crucial role in the overall health of the northeastern forest, since they dominate forest ownership.

How does the timber contest work?

Using the rules below, family forest owners may team-up with forestry professionals to take an active role in growing timber volume. Timber stand improvement, site enhancement, and the providing of water and nutrients are some of the tools that might be used to increase productivity and timber quality. Area and volume measurements are taken at two points in time. Seedling counts are also taken for those interested in advanced forest regeneration. These measurements are adjusted to account for differences in soil quality. The contest has many winners over time consistent with the rules and has no end date; it is expected to continue in perpetuity.

What do the winners win?

There will be certificates, written articles, news stories, and numerous other forms of “bragging rights” conferred. Most importantly, all participants will “win” the enjoyment of being with their families and friends in the outdoors doing something special for their woodlands.

Is there a cost to participate in the timber contest?

There are no direct costs to participate in the contest. However, the landowner will need to work with a forester on one of the three contest categories. Private sector forester may charge for their assistance. Also, the landowner may decide to hire professionals to help with any work. Any costs are the responsibility of the contestant. Some aspects of the contest will require professional forestry assistance, from either public or private sector foresters.

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How much land must I own to enter?

The goals and objectives envision a forest environment. There is no minimum acreage other than the acreage needed to install measurement plots. For those that want to participate but do not own eligible forest land, they may join a team with an eligible landowner. Eligible landowners are described in rule #1 below.

Do I need to place a minimum number of acres under management?

No. The rules allow for a minimum plot size of ¼ of an acre or twenty trees. The quality of the entry is paramount, not brute quantity.

What kinds of trees are eligible?

The rules allow for conifers and hardwoods. You may enter multiple times in the different categories.

Will I need to harvest my trees?

No. However, harvesting trees for firewood, timber, or non-commercial uses is often an important component of properly managed woodlands. You will want to discuss a harvesting schedule with your forester.

Do I need to hire a forester and have a written forest management plan?

A forester must be involved in one of the three contest categories (see rule details below). In some cases a public sector forester might be able to assist; otherwise the contestant will need to work with a private sector forester who would often charge for services. A management plan is not required to participate. Note, however, that both a forester and a management plan are advantageous for the long term viability of your woodlands.

Do I need to be a member of any organization?

No. But you'll find that membership in your state's forestry organization and extension service to be a source of continuous enjoyment!

Where can I find more information?

The contest has a website that is full of good information: www.TimberContest.com If you submit woodland pictures, those will be included on the website.

Contest rules are described below. While they may sound “technical,” there are trained people in your area that can assist you in understanding how to participate and, most importantly, have fun!

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Northeast Timber Growing Contest - Contest Rules

1. Forestland of private individuals and K-12 schools located in NY, PA, VT, CT, MA, NH, ME, NJ, western MD, and WV is eligible. State, federal, university, and college lands are excluded except where K-12 or 4-H students use those lands within this contest as a school-based learning activity that substantively involves the youth.
2. Contestants may submit entries for any or all of three “production” categories for both conifer and hardwood “types” that include: (i) basal area increment, (ii) board foot volume increment, and (iii) seedling regeneration height growth increment. Thus, contestants may submit up to 6 entries for each type and production category. Two-thirds of the basal area must be of conifer or hardwood species to be included in that category.
3. Contestants may submit up to 6 entries, one for each combination of “type” and “production” categories.
4. Entries must be received by May 15 at NYFOA, PO Box 541, Lima, NY 14485. Questions about the contest can be directed to Dean Faklis, at [dfaklis at frontiernet.net](mailto:dfaklis@frontiernet.net). Prospective contestants should notify Dean Faklis of their intent to compete after they have completed their initial measures (see below); notification is not required, but will facilitate communication with contestants. Contestants should submit a timber contest cover sheet for each entry category, a legible copy of their field data (sample templates provided online), and a copy of the soil series forest land productivity chart that lists the representative species and their site index rating. Incomplete or illegible submissions will not be considered. Decisions of the judges are final.
5. Contestants must provide the soil type and corresponding site index rating associated with each combination of “type” and “production” categories they wish to submit into the contest. This information is available as the “Forestland Productivity” chart by soil type through your local Soil and Water Conservation District, or online through the Web Soil Survey at <http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm> (see appendix 1 for an example of what is expected).
6. Judges will standardize the submitted measurements in all three “production” categories based on the average site index (SI) for each entry to account for differences in site quality among contestants.
7. Scores will be determined by the judges for the following specific categories:
 - a. Hardwood-basal area (sq ft / ac / year)
 - b. Hardwood-board feet (total bd ft production / year)
 - c. Hardwood-regeneration (average total height growth / year)
 - d. Conifer-basal area (sq ft / ac / year)

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- e. Conifer-board feet (total bd ft production / year)
 - f. Conifer-regeneration (average total height growth / year)
8. Scores for basal area and board feet will be the % change measured by the contestant divided by the average site index for species represented in the appropriate soil type description (e.g. 12% change divided by an average site index of 53 equals a score of 0.23). Scores for the regeneration categories will be the height increment in inches divided by the average site index score for species represented in the appropriate soil type description. The high score for each category will win that category.
 9. The Grand Prize winner will be determined as follows. The high score in each category will receive 10 points, second place 8 points, third place 6 points, fourth place 4 points and fifth place 2 points. The total number of points for each contestant will be determined and the contestant with the highest total score will be considered the Grand Prize winner.
 10. The standardized scores from each contestant will be accumulated through time. Once a contestant has a cumulative standardized score of 3.0, the contestant will be recognized on the contest website as a Timber Beast.
 11. Winning and notable contestants, and their forester and logger will be showcased annually in the NY Forest Owner magazine. Winners will be announced annually at the NYFOA spring membership meeting. Notable contestants are those who score in the top five entries.
 12. The New York Forest Owners Association, its board of directors, and the judges are not liable in any way for incidents on the property of contestants or in regards to submission of entries.

Measurement Rules

13. Production Category = **Basal Area Increment**

- a. *Intent* – Manage forest stands, irrespective of forest product, for maximum wood volume increment. This category has the easiest methods for an owner to participate in the contest.
- b. *Management treatments* – owners are encouraged to work with forestry professionals to optimize the growth of their woodlands and improve their chances in winning this category.
- c. *Methods* –
 - c.i. Sample frame: Owners will establish three permanent circular sample points using fixed radius plots within one stand. Plot locations should be positioned uniformly in the stand and without bias. Plots should be 0.25 acres (radius equals 58.9 ft). Plots from multiple stands can be submitted to the contest as separate entries if they represent different “type” categories, for

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example conifer versus hardwoods. Only one hardwood “type” and one conifer “type” entry is permitted per owner per year.

- c.ii. Tree selection and measurement: All trees within the plot that are greater than or equal to 6.0” dbh should be marked and measured. Trees should have an aluminum nail placed at one foot above ground. Owners are encouraged to use a numbered aluminum tag to ensure that repeated measurements are assigned to the correct tree. Diameter at breast height (DBH) is measured by placing a 3.5’ stick on the nail, and with a steel diameter tape measuring the stem’s diameter at the top of the stick with the tape perpendicular to the central axis of the tree. Tree diameters should be measured to the nearest 0.1 inch with repeated measurements noting the number of growing seasons that have elapsed. Within a calendar year, July 15th will separate the pre- and post-growing seasons, respectively. In-growth trees, those initially small trees that reach the 6” dbh threshold may be included, but should be noted as in-growth. Missed trees should be noted and reported on the original data sheet. Missed and in-growth trees should not be included in the final calculation because they lack two successive measurements.
- c.iii. Calculation: Basal area in square feet is measured for each tree as $0.005454 \times \text{dbh} \times \text{dbh}$, where dbh is included with inch units (for example, a 14” diameter tree has a basal area of 1.07). The basal area per plot is summed for all trees. Basal area per plot is multiplied x4 to equal basal area per acre. The average basal area per acre is calculated among the three or more plots within that stand. The difference between successive measurements is reported to the contest as average basal area change per year. Measurements need not be made each year, but results are standardized and reported on a per year basis.
- c.iv. Certification: A forester, extension educator, or contest-trained “master” or peer-to-peer volunteer should sign the submission attesting to the adherence to the above described protocols (see submission form).

14. Production Category – “Board Foot Volume Increment”

- a. *Intent* – Manage forests to produce commercially valuable sawtimber. Document the volume growth of sawtimber quality trees as measured by board foot increment.
- b. *Management treatments* – owners are encouraged to work with forestry professionals to optimize the growth of their woodlands and improve their chances in winning this category.
- c. *Eligible species* – Eligible species are those desirable for commercial dimension lumber or veneer products, including species on the state stumpage price report, or that are

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grown, milled for boards, beams or veneer, and sold within the northeastern US. Species grown for local dimension lumber markets, though perhaps not of widespread commercial value, are acceptable. Please contact the contest coordinator if you have any questions.

d. *Methods* –

- d.i. Sample Frame: The owner selects 20 trees of single or multiple species with a minimum diameter of 12” measured at DBH. Trees should be located within a single stand. Owners can monitor more than 20 trees, submitting the growth from the 20 best trees.
- d.ii. Tree selection and measurement: Owners will select trees thought to offer the maximum board foot volume increment. Owners should insert an aluminum nail in the tree one foot above ground. Owners are encouraged to use a numbered aluminum tag to ensure that repeated measurements are assigned to the correct tree. Diameter at breast height (DBH) is measured by placing a 3.5’ stick on the nail, and with a steel diameter tape measuring the stem’s diameter at the top of the stick with the tape perpendicular to the central axis of the tree. Tree diameters should be measured in two or more growing seasons with repeated measurements noting the number of growing seasons that have elapsed. Within a calendar year, July 15th will separate the pre- and post-growing seasons, respectively. Merchantable height is estimated by a forester to a 10” top diameter for hardwoods and an 8” top diameter for conifers. Trees included in the contest should minimally have two faces of the butt log clear of major defects, but grade is not otherwise considered. Volume is measured as gross volume irrespective of defects.
- d.iii. Calculation: Board foot volume is determined and reported based on the International quarter-inch rule¹. The difference in board foot volume is determined on an annual basis, and averaged across all 20 trees. The average board foot volume increment per year across all 20 trees is reported to the contest. Any two measurement dates can be reported, with appropriate calculations to report increment on a per year basis. The percent change in board foot volume will be standardized by the average of the site index reported from the soil series forest land productivity rating (see example in Appendix 1).

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¹ Owners and their forester should be consistent through time and use the same method to determine board foot volume for their comparison of tree volume growth. Approved methods include a volume table, a formula, or computer-based software. A thorough discussion of tree and log volumes is available at <http://www.extension.purdue.edu/extmedia/FNR/FNR-191.pdf>

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- d.iv. Certification: A forester should sign the submission attesting to the adherence to the above described protocols (see submission form).

15. Production Category – **Seedling Height Growth**

- a. Intent – Document the growth of seedlings in a well-stocked regeneration layer of a stand that has been harvested with the intent to regenerate the next forest.
- b. *Management treatments* – Owners will have previously manipulated a particular stand to encourage the natural establishment, growth, and development of commercially desirable species. Plantations or artificially established seedlings are excluded from the contest at this time. Seedlings within growth enhancing tubes are not eligible; fencing of regeneration/harvested areas is permitted to protect seedlings from deer.
- c. *Eligible species* – Eligible species are those desirable for commercial products and as previously described. Species that reproduce from root suckers (e.g., beech, black locust, aspen) are eligible, but stems sprouting from stumps should not be included in the contest. The contest judges may evaluate separately the height growth increment of hardwoods that reproduce from root suckers vs. hardwoods that reproduce from seed.
- d. *Methods-*
- d.i. Sample frame: Within the harvested area, locate 20 uniformly dispersed mil-acre plots (radius = 3.7') within a stand. A mil-acre plot is acceptable for inclusion in the contest if it contains at least 20 seedlings of species when the tallest seedling height is less than 6 ft, or at least 10 seedlings when tallest seedling height is greater than 6 ft. Seedlings are defined as those stems of eligible species that are less than 1.0 inch dbh, and greater than 12" tall. Owners may measure more than 20 mil-acre plots and report on the 20 mil-acre plots with the best growth.
- d.ii. Tree selection and measurement: Within each acceptable mil-acre plot, record the annual height increment of the tallest seedling. The annual height increment is determined based on the terminal bud scale scars of the central leader. Record increment to the nearest ½ inch. Measurements should be made after July 15th. For each mil-acre plot, record the approximate number of eligible seedlings by species, the height of the tallest seedling, and the annual height growth increment of the tallest eligible seedling. The annual growth increment of only one seedling is measured for each mil-acre plot. For this contest category, measurements can be made and submitted in a single year. Subsequent measurement and reporting of these plots is permitted if the plots remain eligible as described above in the "sample frame" section.

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- d.iii. Calculation: Record the average annual height growth increment of the tallest eligible seedlings in the 20 mil-acre plots. The average annual height growth is submitted for the contest. The annual growth increment in inches will be standardized by the average of the site index reported from the soil series forest land productivity rating (see example in Appendix 1).
- d.iv. Certification: A forester, extension educator, or contest-trained “master” or peer-to-peer volunteer should sign the submission attesting to the adherence to the above described protocols (see submission form).

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Appendix 1. Soil – Site Forest Land Productivity

Forestland Productivity– Essex County, New York				
Map unit symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site Index	Volume of wood fiber	
			<i>Cu ft/ac</i>	
HcB—Howard very cobbly loam, 2 to 8 percent slopes				
Howard	American basswood	—	—	Eastern white pine, Northern red oak, Red pine, Sugar maple, White ash
	American beech	65	40	
	American elm	—	—	
	American hornbeam	—	—	
	Eastern white pine	75	137	
	Northern red oak	70	52	
	Red maple	65	40	
	Shagbark hickory	—	—	
	Sugar maple	65	40	
	White ash	70	43	
	White oak	70	52	
MbB—Malone silt loam, 3 to 8 percent slopes, very stony				
Malone, very stony	American beech	53	34	Balsam fir, Red maple, Red spruce, Yellow birch
	Balsam fir	53	118	
	Eastern hemlock	—	—	
	Red maple	53	34	
	Red spruce	47	102	
	Sugar maple	53	34	
	Yellow birch	53	34	

In the above example, the average site index for the Howard soil series is 68.57 (480 / 7). The average site index for the Malone series is 52.00 (312 / 6). For contest plots located on the Howard soil series, for example, the % change or annual seedling growth increment in inches would be divided by 68.57, regardless of the species present in the contest plots. This process standardizes the entries such that plots from poor soils are not inherently disadvantaged in the contest.