Northeast Timber Growing Contest

Workshop - March 14, 2015

Dean Faklis, Dave Williams, and Dr. Peter Smallidge

Coordinated by
New York Forest Owner’s Association
Cornell University - Department of Natural Resources

Special Thanks to NYFOA Southern Tier Chapter!
Contest? What's That & Why Should I?

**Goal:** To improve the productivity and health of small private woodlands through the engagement of landowners and professionals in a process that includes education, research, and friendly competition.

*Or.....Growing Good Timber While Having Fun!*

- **Grow** YOUR trees to enhance YOUR investment.
- **Improve** the forest. Help good trees become great trees, faster.
- **Learn & Apply** skills...together with YOUR family and friends.
- **Know** exactly what to do.....remove the guesswork.
- **Focus** YOUR efforts. Measurements don't lie.
- **Strengthen** relationships with family, peers & forestry pros.
- **Build** YOUR legacy...YOUR children's & grandchildren's forest!

“Are You Growing Good Timber?” - P. Smallidge's excellent companion video, on the contest website
How Does the Contest Work?

Challenges help to focus the mind on a desirable outcome & friendly competition keeps it motivating!

Eligible?: As few as 20 Trees! But More is More Fun.
Gear?: Simple Measuring & Marking Tools
Term?: Annual Winners, but the Contest is Perpetual
Tricks?: Yes! Manage Water, Nutrients, & Sunlight
Result?: Increased Timber Value, Stronger Legacy
Help?: Lots of It!

Goal for today...introduce the rules and get our hands dirty! Create friendships and avenues to get questions answered!
What are the Rules?

There are no rules here, we are trying to accomplish something!  
- Thomas Edison

I believe we need rules. If there weren't any, how could you break them? - Chicago Cubs Coach, Leo Durocher

OK...we need a few rules!

- Choose a type category (conifer or hardwood)
- Choose a production category to maximize Basal Area, Board Foot Volume, Seedling Height Growth
- Create Plots in the Forest, Take Measurements, Send in Summary
- Celebrate Bragging Rights to the Winners!

Let's get down to the details.....and...what the heck is Basal Area?!
Let's Define Some Terms

**Basal Area:** Cross-sectional area of a tree at breast height (4.5' from ground).

Wooden “cookie” and measuring stick demonstration.

Measure diameter at breast height (dbh), compute area.

Measure all eligible trees. Computers do all the work!

Basal Area is expressed as Sq.Ft./Acre....a measure of crowded-ness.

**Goal...make Basal Area bigger. Only fatten your best trees! Use the rest.**

**Formula for calculating Basal Area**

Basal Area = 0.005454 x DBH²

Example: a tree has a 12 inch DBH

Basal Area = 0.005454 x 12² = 0.79 ft²
Basal Area Thinning Chart

Plot Your Measured Values on Stocking Chart
Red is Thinning
Blue is Growth
Use the TSI Material if Possible

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Let's Define Some More Terms

**Board Foot Volume:** Sawlogs are sold based on wood volume, among other factors. Board Foot Volume is determined by measuring DBH and merchantable height of the tree and using a table of values.

*Goal... make the best trees fatter & taller! Use the rest.*

**Site Index:** Some soils are better than others. The “playing field” is leveled using site index, a measure of how tall a tree will grow on the site in 50 years. For example, if a tree grows to 70 feet in 50 years, the site index is 70.

Questions?
Soil Maps – Soil Survey Website...from the Rules

Workshop Property - Coordinates:  42.3532, -75.411336
Approximate location of sample plots (red circles)
Example: McB, Mardin and Wellsboro

Site Index, by Species, from the Website:

- Beech: 70
- Black Cherry: 70
- Ash: 77
- Red Oak: 67
- Sugar Maple: 70

Average Site Index = \(\frac{70 + 70 + 77 + 67 + 70}{5} = 70.8\)
OK...So How Do I Play!

The Basics: Rose and Chuck Wood have a nice 5 acre stand of red pine
They choose the Conifer Type category.
They choose the Basal Area Increment Production category.
In the woods, they identify three ¼ acre sample plots.
They number each eligible tree and measure its diameter.
They input the measurements into the computer.
They come back next year and remeasure the diameters.
They compute growth and send in the contest summary.
Their measurements provide a clear prescription for how to thin.

That's Easy! But let's fill in some details.....
**The Tools**

**Continuing with Rose and Chuck...**

A ¼ acre circular sample plot has a radius of 58.9 ft (19.6 yds)

With a stake at center, use a rangefinder or tape-measure to find perimeter

Measure dbh of all trees with a dbh greater than 6”

Number the tree with a tag or paint, insert a nail at 12” off the ground

Place your stick on the nail to get to “breast height.”

Use a diameter tape to measure dbh.

Record your measurement on the tally sheet.

Compute Basal Area or use the spreadsheet at www.timbercontest.com

**Questions?**
Continuing with Rose and Chuck...

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<th>Spp</th>
<th>Tag #</th>
<th>DBH 1 (inches)</th>
<th>DBH 2 (inches)</th>
<th>Plot Number</th>
<th>Spp</th>
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Circular plots have a radius of 58.9. Entry should include a minimum of three plots per stand.
Please follow measurement protocols as prescribed in the contest rules.

Date of DBH 1 = 04/14/2015
Date of DBH 2 = xx/xx/20xx

To maximize fun...Dig Deeper....
The Timber Contest Rules document is located at:

www.timbercontest.com

It's loaded with good information that builds on today's presentation.
More fun to read on your own...so let's discuss today's field work...

After the workshop field work, it's back here for sample calculations and Q&A!
Workshop Field Work – 3 Plots, so 3 Groups

**Group's Captain:** Operates laser from plot's center

**Group's Photographer:** Catches fun moments on “film” for the website!

**Group's Teams:** Do All the Work!

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**Perimeter Team, Mid Team, Center Team**

**Team Mates:** Point Person, Tagger, Measurers, Data Recorder

**Perimeter Team:** Finds boundary trees with Captain, and measures them
  - Point person agrees to be shot with laser

**Mid Team:** Measures trees in the middle of plot

**Center Team:** Measures trees near the center of plot
Team Mates

Point Person:
Determines if tree's DBH is > 6” with tape measure
If so, removes snow towards center of plot to expose base
Assists Tagger with tree tag location

Tagger:
Carries hammer, nails, tags and stick
Drives nail thru tag, 12” above ground, not all the way!

Later, stick will rest on nail to locate “breast height”

Captain Using Laser on a Perimeter Tree
Never Aim Laser at Eyes
Point Person Look Away

Point Person & Tagger then move to the next tree in their zone...
Point Person & Tagger
Measuring Experts & Recorders

Measuring Experts:

- Tie flagging tape on the tree
- Determine tree species – don't know?, ask MFO for assistance
- Place stick on nail, measure DBH using tape measure
  - Measure to nearest 0.10”.....but don't stress out!
  - You're shooting for consistency from tree to tree

Data Recorders:

- Neatly record tag #, species & DBH. Move with Measurer to next tree.
Measuring Experts

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Recorder.....and a stem cluster

Multiple stems are multiple trees!
Now...where's that diameter tape?
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Special Thanks to:

Dr. Peter Smallidge and CCE for the Basal Area gauges
NYFOA Southern Tier Chapter for financial assistance with food and more
Kathy Williams and the Food Team for providing Great Food! Thanks!
MFOs and NYFOA Board members for their help today
Our Foresters, Mark and Karl
East Guilford United Presbyterian Church

The contest provides a friendly opportunity to encourage, reward, and recognize forest owners who take pride in their woodlands.

www.timbercontest.com

Questions: Dean, dfaklis at frontiernet.net

Measurements by 15 JUL, Reports Due by 15 MAY