



From the Ground Up

The Nursery Tree Production Process

Becky Thomas, Spring Grove Nursery

Spring Grove Nursery

- 90 Acre Nursery in Mazon, IL
- Diverse & Superior Selection of Trees
- Dig B&B Trees in a range of 2-4" Caliper
- Started Growing in 1999
- Ornamental Growers Association





www.SpringGroveNursery.com

- **Becky Thomas**

- Grower, Landscape Architect
- IGIA Board of Directors
- OGA Board of Directors

- **Jamie Thomas**

- Grower, ISA Certified Arborist



Tree Trivia

- At more than 4,760 years old, this tree is the oldest living organism on Earth. What tree currently living in North America is it?
- The bark from which of these trees has medicinal properties & is commonly used in the manufacture of cough medicine?
Black Walnut, Black Locust, Black Cherry, or Suppressant Spruce?



The Nursery Tree Production Process

B&B Tree Nursery with 2-4" Caliper Range

- Planting New Trees
- Growing Quality Trees
- Harvesting & Delivering Trees
- Timeline to grow a tree
- What Can Go Wrong?
- What Can Go Right?
- Nursery/Municipal Partnerships
- Growing Forward...



Planting New Trees

- Largest & most important part of the growing process
- Begins with relationship with Oregon liner producer
- Ends about a month after planting day in the nursery
- Approx about 50% of the cost of growing a tree



In the Beginning...

- Liner trees come from Portland, OR area
- Liner orders are on a contract basis with orders placed 2-3 years ahead & kept on a rolling basis
- Bare root, container, root bag, air pot
- 5-10 year timeline depending on tree species & method
- Seed, tissue culture, cutting, grafts



New Tree Development

- ▶ Leading nurseries like J. Frank Schmidt & Carlton Plants develop & produce new liners
- ▶ Programs like Chicagoland Grows work with OGA nurseries & Morton Arboretum to develop & evaluate new tree varieties
- ▶ Quality nurseries stay educated on new varieties to grow
- ▶ 20+ years invested in a new tree variety before it is available to market



Shipping New Trees

- Bare root liners harvest in Oregon in fall
- Liners are held over winter in OR in temperature controlled building or mulch outside
- Liners are shipped to IL mid-March on refrigerated trucks
- Liners are stored here in mulch until planting day – roots must be kept moist & protected
- Temps here mimic refrigeration in March



Planting Day in the Nursery

- Ground prep previous season – summer or fall year before
- Bring trees from mulch to planter – trim roots as needed
- Plant – at SGN we plant about 1,500-2,000 trees a day with a shade tree planter & crew of 10-12 people
- Some trees planted by hand with auger on skid steer
- Planting usually last week March or first week April



Off to a Good Start

- Most important day in the life of the tree
- Quality roots
- Proper planting depth
- Straighten & fix after planting
- Prune back branches & establish leader within first few weeks
- Re-straighten & fix 2-3 times after first few rainfalls



Growing Quality Trees

- Pest & Disease Control
- Staking
- Pruning
- Establish good central leader & structural branching
- Nursery Maintenance
- Irrigation/Watering
- Approx 25% of the cost of growing a tree



Harvesting & Delivering a Tree

- Trees harvested in spring & fall depending on species
- Harvest when dormant
- At SGN 1 crew can dig about 100-200 trees/day depending on conditions
- Trees dug to ANSI standards
- After digging, trees staged for delivery
- Holding Yard trees placed on drip irrigation
- From digging to delivery/holding about 2-4 week window
- Approx 25% of the cost of growing a tree



Timeline to Grow a Tree

Example: Autumn Blaze Maple

► OREGON

- Year 1 – Tissue culture and/or soft wood cutting stuck & kept in greenhouse
- Year 2 – Transplanted to outdoor propagation bed
- Year 3 – Lined out in field rows
- Year 4 – Spring – stubbed down to 1" above soil line. Grow straight & stake used to produce straight central leader. Expect 8' growth. Tape & prune off lower limbs. Saleable at this point as a 1 yr top.
- Year 5 – Root prune to develop good root structure & hold back top growth. Dormant prune in spring for structure. Summer prune as needed. Result 6' 1.25" branched 2 yr tree



Timeline to Grow a Tree

Example: Autumn Blaze Maple

► ILLINOIS

- Year 6/Year 1 – Liner arrives in March on refrigerated truck & healed in mulch. Planted early April into field. New liner pruned & straightened. Central leader established.
- Year 7-8/Year 2-3 – During growing years trees are pruned, staked, flexed, sprayed, & limbed up.
- Autumn Blaze Maple harvested after 2-3 years growing so 7-8 years
- **CONTRAST WITH GINKGO**
- **Ginkgos are 10 years in OR & 5 years in IL so 15 years total**



What Can Go Wrong?

- Weather
- Drought of 2012
- Winter of 2013/2014
- Economy
- Consistent Liner Supply
- Quarantines
- Pest/Disease Issues
- Did I mention weather?



What Can Go Right?

- Good relationships with liner producers – quality liner
- Proper planting conditions
- Good growing conditions
- Proper pruning & care
- Timely harvest & handling
- Educated customer
- Right tree – Right spot
- Quality tree thrives in communities
- Tree provides many years of eco-benefits to the landscape





Nursery / Municipal Partnerships

Can the two partner together for long term contracts?

➤ PROS

- Municipalities secure the quality & quantity needed for planting projects
- Nurseries have a partner in the upfront risk of growing
- Both sides have more security in long range planning
- Pricing can be negotiated upfront – budgeting easier
- Municipalities can get the diversity or supply they want

➤ CONS

- Always a risk in long term growing – weather, pests, etc
- No guarantee on the quantity of trees brought to market – only projections
- Changes in personnel or policy in municipalities along the way
- Labor issues always unknown – especially on liner producer end

From the Ground Up

Growing Forward...

- ▶ Quality trees in the landscape take many years of care & commitment from the grower
- ▶ New tree varieties (such as “nativars”) can be developed, grown, & planted in the landscape
- ▶ Nurseries do more than grow trees – they are key partners in the success & life of the tree



“To exist as a nation, to prosper as a state,
and to live as a people, we must have
trees.” *Theodore Roosevelt*

