NYS DEC Colonel William F. Fox Memorial Saratoga Tree Nursery

The New York State Nursery Program

Stock Type, Seed Source

“Native” Plant Availability

Considerations

NURSERY HISTORY: Early Years

- New York's Nursery Program started in 1902.
  - Lumber Industry and farming had taken its toll.
  - Reforestation (based on European forestry practices).
- As many as 4-5 smaller Nurseries running at one time Infrastructure constraints.
  - As geographic planting needs were met. Close it up and relocate.
  - (Total: 16).

State Operated Nurseries of New York

- **1898-1908** Axton, Franklin County, Cornell School of Forestry Experimental Forest.
- **1902-1906** Brown's Station, Town of Olive, Ulster County. Location now under Ashokan Reservoir.
- **1904-1937** Lake Clear and the Patnode Nursery, also the Saranac Nursery and Forest Experiment Station at Saranac Inn Station (all located near / around Lake Clear Junction), Franklin County, NY – exact growing area locations and duration of each site changed several times dependent on demand. These smaller nurseries are usually all referred to as Lake Clear Nurseries in publications making it hard to distinguish between them.
- **1908-1922** Salamanca, Cattaraugus County
- **1911- present** Saratoga, City of Saratoga Springs, Saratoga County,- initially four acres near Coesa Spring (now site of SPAC), moved to 100-acre parcel on Rt. 50 in 1919, additional 150 acres added in 1927 (Route 9 Nursery)
- **1912-1919** Great Meadows Prison, Comstock, Washington County
- **1915-1922** Central Islip Hospital, Suffolk County
- **1916 - ?** Indian Lake Nursery, Hamilton County (date of closure sometime before 1928)
- **1920 - ?** Rome Nursery, Oneida County (operated on and by State prison) (ending date before 1928)
- **1922-1971** Lowville Nursery, Lewis County
- **1928-1939** Horseheads, Steuben County
- **1929-1939** Painted Post, Steuben County
- **1932-1939** Tully, Onondaga County
- **1958-1971** Shelby, Orleans County

Nursery Production Influencers: Social, Political, and Economic Factors

- In 1907, New York State began offering seedlings at cost to private landowners.
  - Private Industry safeguards in place.
- The Free Tree Bill of 1920
  - seedlings available to municipalities and school districts for planting on government lands.
- The Great Depression: Farms abandoned people moved to the cities.
  - Led to the enactment of the State Reforestation Law of 1929 and the Hewitt Amendment of 1931.
    - These laws allowed the State to purchase abandoned land and create State reforestation areas.
- Civilian Conservation Corps era
  - supplied work for thousands of young men in NY.
  - seedlings produced at the State's nurseries were used to accomplish the vast plantings
  - CCC + NYSS = SRA = WP + TP + RO + KP
- To date, over 1.6 + billion seedlings of a variety of species have been produced and distributed through the Nursery program.
- **Seedlings not just for reforestation anymore.** Seedlings for Conservation Plantings: timber crop production, watershed protection, wildlife habitat improvement, development of recreational areas, erosion control, and promotion of biological diversity.
- Today, the nursery's annual production is between 1 – 1.5 million.

SEEDLINGS DISTRIBUTED FROM THE STATE-OWNED SARATOGA NURSERY NEW YORK STATE

YEAR	TOTAL	TO STATE LAND	TO NON-STATE LAND	SHRUB SEEDLINGS
2003	1,196	187	819	190
2004	1,228	200	868	160
2005	1,125	167	798	160
2006	1076	107	812	157
2007	1011	119	702	190
2008	1055	210	636	209
2009	932	218	539	175
2010	927	220	524	183
2011	820	242	414	164
2012	667	170	369	128
2013	522	82	319	121
2014	452	68	295	89
2015	455	58	304	93
2016	632	204	292	136
2017	608	137	353	118
2018	499	44	291	164
2019	574	173	267	134
2020	493	26	317	150
2021	588	35	378	175
2022	500	34	297	169

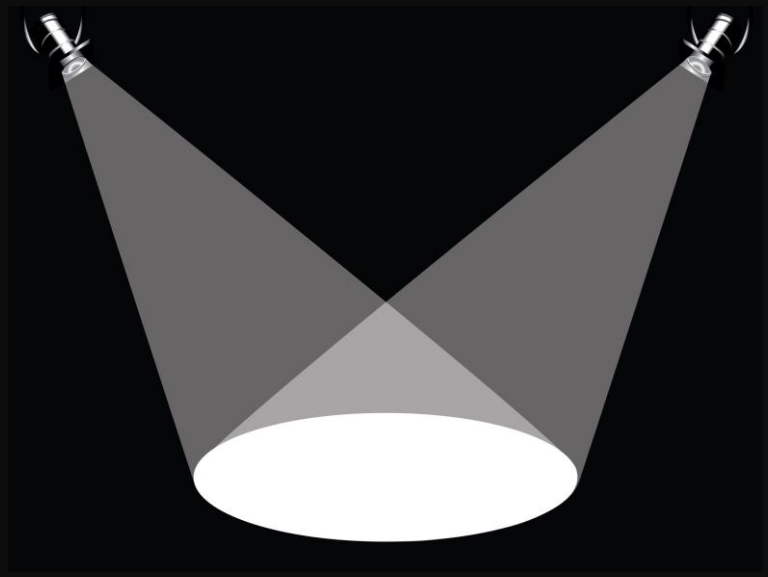
New York Governor’s Pledge To Meet New York State’s Goals Under The Climate Act

New York to reduce economy-wide greenhouse gas emissions **40 percent by 2030** and no less than 85 percent by 2050 from 1990 levels.

- To make this a reality, Governor **Hochul** is announcing a goal of planting **25 million trees** by **2033**. This goal will invigorate our state’s tree planting efforts, send an unmistakable market signal to private nurseries, advance efforts to meet the Climate Act’s net-zero goal, and grow the states vital forest products industry.
- To assist in achieving this lofty goal, New York State to use Bond Act Funds to Modernize The State’s Nursery. Annual production goals to increase to 6-8 million over the next 10 years.
- Joint effort (public and private)

From the Chopping Block to The Spotlight

- New York is not alone.
- NJ, New Hampshire, Wisconsin investing
- Ohio is reopening



Stock Types:

- Bare-Root – 90% of our production

  Pros: cost, care, shipping, transport to site. planting

  Cons: narrow window, handling

- Containerized (plugs) – 10% of our production

  Pros: window opens, more forgiving to handling error, conifers thrive

  Cons: Care costs increase; acclimate and holdover (hardwoods have issues)

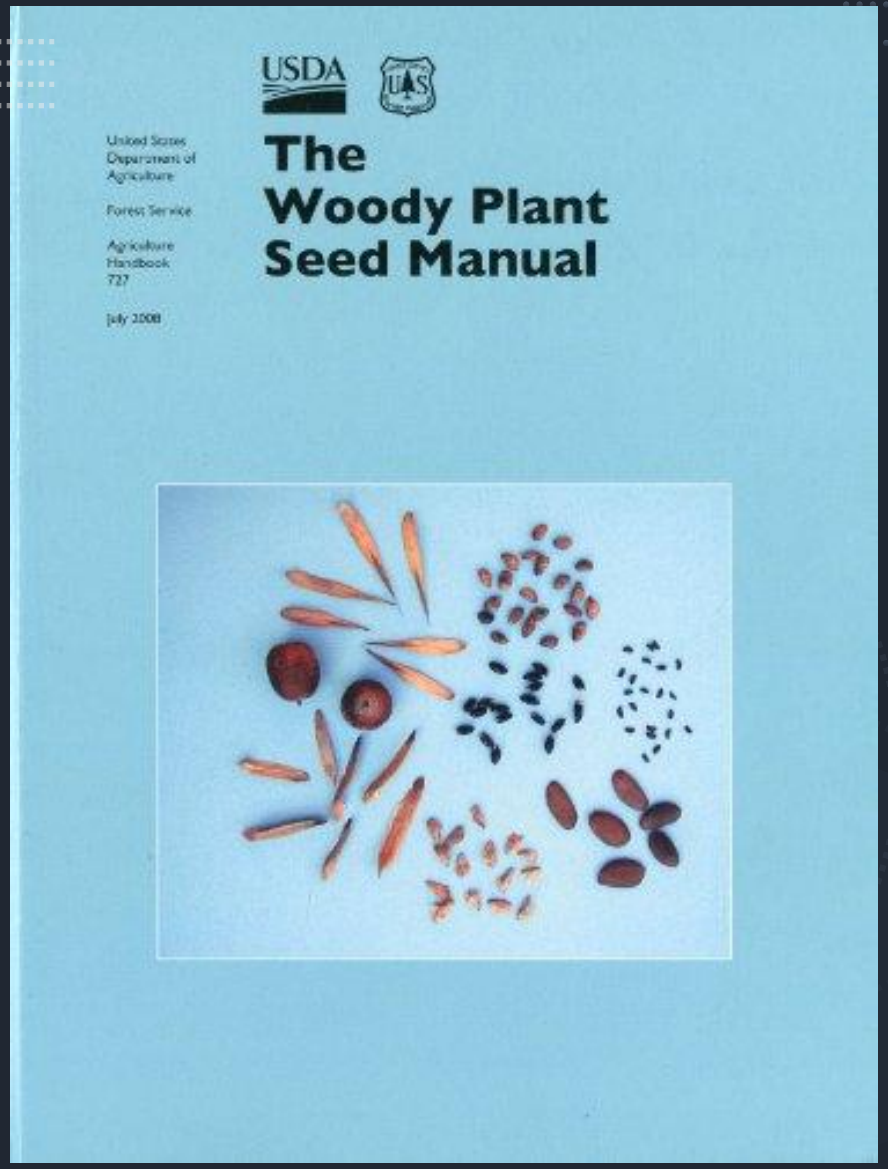
- Potted (0.5 – 4 gal.) – Produce 1 – 3,000 annually for DEC projects.
- Balled & Burlapped – Do not produce.

SEED SOURCE: Homegrown / Contract out

- What is acceptable? How important. (Does this include urban areas?)
- Are all involved speaking the same language? Definition consistency.
- Buy or collect? Do you trust the supplier? Budget? Seed Storage?
- Cooperators & volunteers can save a project.
- Seed alternatives: root and stem cuttings.
- Northeast seed crops are getting harder to predict. Western sources still going strong.
- The more constraints – less options.

What can your operation propagate?

- Infrastructure available? (Growing beds, greenhouses, water supply, irrigation system, equipment, coolers, etc.)
- Target species?
- What are the stratification requirements? (Can you wait to see results?)
- What are propagation requirements of desired species? (H20, shading, soil, pests)
- Staffing hours available?
- What is considered successful? (Expected output)



FLASHBACK: NYS NURSERY OPERATION

- Today – growing 50 species - %86 Native

  (1/3 each of conifers, hardwoods, shrubs)

  - 1991 – growing primarily 22 species – mainly conifers - %50 N-%50 NN
- 92 acres of seed bed area – 30 acres currently under production
- 9,000 square feet of greenhouse space (Projected to increase)
- Seed plant on site: currently processing 100-1000 Bu. per year both fruit and cone
- Majority of stock grown from seed – Native NY seed sources preferred
- Seed storage capabilities (conifers 10 year, shrubs 3-5 years, hardwoods difficult)
- Always willing to assist.

SEED ORCHARDS & SEED PRODUCTION AREAS

- Maintaining over 150 Acres.
- Distinguish between area types,
- Importance of these areas. USDA HZ
- Harvest methods.
- Seed Lot # assigned to collections.
- Maintenance / upkeep
- Not limited to these areas - Supplement with wild collections.
- Food for thought - Should we limit genetic make-up?

Purchase Fruit and Cone From the Public.

- Each year we put out a cone and fruit letter.
- Will purchase from seasoned collectors or general public.
- Reserve the right not to accept collections.
- Tools and supplies to assist the beginner: orchard ladder, cone hook, nut wizard, pruners, 5-gallon pails, grain or burlap bags, tags, wax pencils. & if you are lucky active squirrels.
- If timing is correct; ask permission to collect at a logging job.

Cone and Fruit Chart

Species	*Ripening Date*	*$/ Bushel*
Conifers		
White Spruce	August 30th	$50.00
Red spruce	August 30th	$40.00
White pine	August 30th	$12.00
Hemlock	September 15th	$125.00
Red pine	September 30th	$40.00
Pitch Pine	September 30th	$40.00
Jack pine	September 30th	$30.00
Hardwoods		
Black cherry	August 30th	$60.00
Black walnut	September 15th	$4.00
Butternut	September 15th	$8.00
Red oak	September 15th	$20.00
White oak	September 15th	$35.00

Take a Stab At Processing

- Do Not Let Cone & Fruit Overheat.
- Drying Racks
- Macerator (blender – Dybvig)
- Desktop Cleaner (Tabletop)
- Storage
- Consult Woody Seed Manual.

NATIVE PLANT AVAILABILITY
For the Non-Grower in Northeast.

- Always ask where seed source is from. You may be surprised.
- Stricter the guidelines, the more hurdles will be encountered.
- Easier to make decisions based on compatible USDA hardiness zones.
- Private Nursery buy in. It's a business (financial gain = bottom line)
    - Opportunity to contract out growing to private nurseries – using seed you provide.
    - Nursery location less important if you are supplying the seed.
    - Give as much lead time as possible. (2-3 years)
- STATE RUN NURSERIES SHOULD SUPPORT THE PRIVATE SECTOR. FILL THE VOID. NEVER COMPETE WITH.
- Ability of State Run Nursery to interact with Private sector varies State to State and may involve changes in that State's legislation.
- **DO NOT ASSUME** plants are Native and/or local source, even if purchased from municipalities.

NOT ALWAYS ON THE SAME PATHWAY

- Seedbed plans are made two - three years in advance of sale date.
- Hard to propagate species may need even more lead time. Or be removed from consideration.
- Production goals are based on previous sales.
- If you know your needs – DO NOT keep them a secret. Plan ahead!!
- The best growers can not predict natural disturbances. LIKE LIFE – IT HAPPENS

Considerations

- Climate Change:
  - Weather patterns changing.
  - Frost heave – loss of cone and fruit crop.
  - Will some species be lost (Jack pine in NY)
  - Seed crops from further south ?

Thank you for watching! I'm grateful for the opportunity to present to you. Any final thoughts?