

SILVICS ASSIGNMENT – SPECIES TABLE

**This silvics sheet (V.1.2) was compiled by the 60 trainees who participated in the Certificate Course in Ecosystem Silviculture, 2005 – 2007.

Tree Common Name: Sugar Maple

Tree Scientific Name: Acer saccharum

TREE SPECIES ADAPTATIONS		
GENERAL		
	Longevity/typical life span for Lake States	250 years ,up to 300 yrs
	Maximum stem height	70 – 100 ft, 120 ft.
	Any mycorrhizal requirements/info.	None, Endo to Ecto
REPRODUCTION		
	Minimum seed bearing age	Min. 22 yrs, 40-60 max
	Fruit type (cone, catkin, and so on)	Samora, double wing
	Periodicity of large seed crops	2-5 yrs, 1-4 yrs, 2-7 yrs depending
Seed dispersal	Date	Autumn
	Mode ¹	Wind
	Distance (max)	Up to 300 m, typically 2-3 heights, 330 or so
Seed Characteristics	Longevity	Some viability up to 2 nd , mostly 1 st yr, < 1 yr or 2
	Weight	15,400 seeds per kg, 7,000/lb
	Germination percentage	Moderate – 39%, 95%
	Time of ripening	Aug – Oct (12 weeks after poll.) Sept
	Viable seed percentage	50%
	Sprouting ability	Vigorous, stump, occasionally layer, very good
	Seedling regeneration strategy ²	Current, some 2 nd year
	Any cold stratification period	Yes, 32 – 35 degrees 90 days
	Preferred seedbed ³	Humus, undisturbed layer, leaf litter
ESTABLISHMENT		
Seedbed Conditions	Light requirements	Low light, early survival and shade, germinate before leaf out
	Soil surface temperatures	1 degree C, germinates before snow melts, cool , 34 degrees
	OM thickness	Thin, can penetrate, heavy and thick
	Shrub/herb cover	Thick herb. Layer will inhibit, Tolerates well
	Moisture	Cool, 7760 mm ppt., Moist
	Any soil pH requirements	Optimal 75.5, 5.5 (3.7-7.3)
	Seedling growth rate information	Enhanced by shade, 5 yrs ht. 50” w/65% cover
DEVELOPMENT		
Juvenile environmental requirements	Light requirements	Best at 35%, 5-35%, 25 5 sunlight
	Shade tolerance	Tolerant
	Growth rates/competition info	30 cm, slow moderate, leafs out early
	Response to release/age relations - juvenile	Very good, height and diameter
	Juvenile growth rate information	30 cm per year
	Height growth determinate/indeterminate	Determinate
	Self-pruning	Yes – multiple flushes
DAMAGING AGENTS – ANY STAGE ⁴		
	Flowers	
	Fruits	

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TREE SPECIES ADAPTATIONS		
	Leaves	
	Growth	
	Decay/Defect	
	Bark	
	Roots	
WILDLIFE/CONSERVATION CONSIDERATIONS		
	Cavity tree potential ⁵	Excellent, high
	Common mast consumers	Rodents, squirrels, mice
	Known RTSE issues	
	Known principal associated species (avian, mammal, herps, and so on)	Example: salamanders in duff of northern hardwoods
HABITAT		
	Forest Ecological System	Mesic Hardwood
	NPCs	All except Mhw36
	Forest structure	Uneven-aged, Multi-storied
Mature tree environmental requirements	Moisture ⁶	Moderate, 20-80% high
	Nutrients ⁶	Moderate to High
	Shade tolerance ⁷	Very tolerable
	Response to release/age relations - mature	
	Soil pH (extremely acid or alkaline soil requirements only)	>5.5
	Drought tolerance ⁷	Low, seedlings intolerable
	Water-logging	Low
	High temperatures	Low, limits germination > 50 degrees
	Windfirmness ⁸	Windfirm
Canopy	Gap size	25-66'
	Density	Pretty dense

- 1 Seed dispersal – mode. Select from the following: wind, mammals, water, birds
- 2 Seedling regeneration strategy. Report the dominant seedling strategy from the following: Seedling Bank, Soil Seed Bank, Current Seed Crop, Serotinous Cones.
- 3 Preferred seedbed. Mineral Soil, Humus, Humus/Soil Mix, Pioneer Mosses, Sphagnum Mosses, Decaying Wood, Burned Duff, Burned Organic Soils, And Organic Soils
- 4 Damaging Agent – Any stage including: fruit, seedlings, juvenile, mature. Damaging agents – Mechanical, Insect, Disease, Herbivory and so on
- 5 Cavity tree potential – “Managing for the birds” booklet
- 6 Environmental requirements – moisture & nutrients. Low, Moderate, and High
- 7 Environmental requirements – shade & drought. Very Tolerant, Tolerant, Intermediate, Intolerant, Very Intolerant
- 8 Windfirmness - not stem breakage
- 9 Forest structure – multi or single layers? Example, forbs (ground nesters), shrubs, canopy, co-dominants, dominants