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: Red Oak **Tree Scientific Name:** Quercus rubra

TREE SPECIES ADAPTATIONS		
GENERAL		
	Longevity/typical life span for Lake States	200-400
	Maximum stem height	65-95, > 30 in (100ft)
	Any mycorrhizal requirements/info.	none
REPRODUCTION		
	Minimum seed bearing age	25-30 yrs, optimum 50 -75
	Fruit type (cone, catkin, and so on)	acorn
	Periodicity of large seed crops	2-5 yrs
Seed dispersal	Date	Late Aug – late Oct, Nov
	Mode[1]	Gravity and animals
	Distance (max)	Variable, not far
Seed Characteristics	Longevity	1 yr in seed bank
	Weight	heavy
	Germination percentage	84 %
	Time of ripening	Sept, Oct 2 yrs
	Viable seed percentage	58 %
	Sprouting ability	Stump and root collar, sometimes can die back and resprout after fire or drought
	Seedling regeneration strategy[2]	Current seed crop
	Any cold stratification period	30-45 days @ 0-5 C
	Preferred seedbed[3]	Mineral soil, 2 cm below
ESTABLISHMENT		
Seedbed Conditions	Light requirements	30%
	Soil surface temperatures	Cool, 34 degrees
	OM thickness	Light leaf little
	Shrub/herb cover	Tolerate shade for germination
	Moisture	Well drained
	Any soil pH requirements	None found
	Seedling growth rate information	About 24” annually
DEVELOPMENT		
Juvenile environmental requirements	Light requirements	> 30% to establish
	Shade tolerance	intolerant
	Growth rates/competition info	Few cm/yr, doesn’t compete with other species
	Response to release/age relations - juvenile	Best at < 30 yrs
	Juvenile growth rate information	0 – 0.4 inches annually, moderate to fast in 40 days
	Height growth determinate/indeterminate	Determinate w/90% complete in 40 days
	Self-pruning	No, epicormic can be prolific, Yes moderately good
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]	Excellant
	Common mast consumers	Turkeys, woodrucks, squirrels, chipmunks, deer, bear, 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	MH sometimes FD
	NPCs	MHc26, Fdc 34, MHn 35, MHc 26, 31 FDc 24,25,34
	Forest structure	Mixed, multi layered
Mature tree environmental requirements	Moisture[6]	Moderate
	Nutrients[6]	Medium - high
	Shade tolerance[7]	Med. To tolerant, less so with age
	Response to release/age relations - mature	Responds well if trees are codom or above average, best released < 30 yrs
	Soil pH (extremely acid or alkaline soil requirements only)	Non found
	Drought tolerance[7]	intermed
	Water-logging	No
	High temperatures	No
	Windfirmness[8]	excellent
Canopy	Gap size	Minimum 92 sq. ft, 285 – 492 ft 1-2 tree heights
	Density	60-70% optimal

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