

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 Pine

Tree Scientific Name: Pinus resinosa

TREE SPECIES ADAPTATIONS		
GENERAL		
	Longevity/typical life span for Lake States	300 – 400 yrs
	Maximum stem height	150 ft typical 100'
	Any mycorrhizal requirements/info.	Extensive ectomycorrhizal
REPRODUCTION		
	Minimum seed bearing age	12 yrs, 50-60 yrs, 50-150 optimal
	Fruit type (cone, catkin, and so on)	Cone
	Periodicity of large seed crops	3-7 yrs, bumper every 10 yrs
Seed dispersal	Date	Oct - winter
	Mode <sup>1</sup>	Wind, gravity, animals
	Distance (max)	40 ft (average) up to 900'
Seed Characteristics	Longevity	Up to 3 yrs, 10 yrs cold storage
	Weight	52,000/lb
	Germination percentage	High variable
	Time of ripening	Early autumn
	Viable seed percentage	
	Sprouting ability	None
	Seedling regeneration strategy <sup>2</sup>	Current seed crop
	Any cold stratification period	14-21 days
	Preferred seedbed <sup>3</sup>	Mineral soil, moss somewhat
ESTABLISHMENT		
Seedbed Conditions	Light requirements	35% of full sunlight minimum
	Soil surface temperatures	70-86 degrees F
	OM thickness	Little to none
	Shrub/herb cover	Inhibits regeneration
	Moisture	Critical, May – July, overall high
	Any soil pH requirements	4.5 – 6 (5.1-5.5 is best)
	Seedling growth rate information	2" first year
DEVELOPMENT		
Juvenile environmental requirements	Light requirements	Max in 45% up to age5
	Shade tolerance	2.4 on 1 – 10 scale, Intolerable by can survive in partial
	Growth rates/competition info	2" first year, 20% ht of dominant
	Response to release/age relations - juvenile	Good
	Juvenile growth rate information	12" per year for first 50 years
	Height growth determinate/indeterminate	Determinate
	Self-pruning	Yes – best of n. conifer except tamarack, begins pruning @ 25yrs, little until 40 yrs
DAMAGING AGENTS – ANY STAGE <sup>4</sup>		
	Flowers	
	Fruits	

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TREE SPECIES ADAPTATIONS		
	Leaves	
	Growth	
	Decay/Defect	
	Bark	
	Roots	
WILDLIFE/CONSERVATION CONSIDERATIONS		
	Cavity tree potential <sup>5</sup>	Good
	Common mast consumers	Squirrels, birds, moles
	Known RTSE issues	
	Known principal associated species (avian, mammal, herps, and so on)	Example: salamanders in duff of northern hardwoods
HABITAT		
	Forest Ecological System	FD
	NPCs	In all n anc c FD FDn 12, 33, 43 c 12, 23, 24, 25, 34
	Forest structure	Even-aged
Mature tree environmental requirements	Moisture <sup>6</sup>	Low- Mod
	Nutrients <sup>6</sup>	Low - Mod
	Shade tolerance <sup>7</sup>	Intolerable
	Response to release/age relations - mature	Can respond, good to age 40
	Soil pH (extremely acid or alkaline soil requirements only)	4.5 - 6
	Drought tolerance <sup>7</sup>	Tolerable
	Water-logging	Intolerable – root die back 23 mo
	High temperatures	Very tolerable when mature
	Windfirmness <sup>8</sup>	Very
Canopy	Gap size	
	Density	

- 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