TAMARACK

Cover Type Guidelines

HARVEST SYSTEMS

Clear cut or seed tree at rotation age. About 10 windfirm, vigorous, open grown form trees per acre are required for successful seeding.

ROTATION AGES

Tamarack growth slows after 40 years. Lower site stands will require a rotation age up to or beyond 90 years to produce merchantable products. High site stands, typical of the more upland soils will produce quality products and high yields on a rotation as low as 40 years.

REGENERATION SYSTEMS

The most economical method of regenerating tamarack is by natural seeding. Recognition of seedbed requirements, proper orientation and size of rim cuts, timing of block cuttings to occur during heavy seed years, and selection of superior quality seed trees are necessary for successful natural seedings.

Artificial regeneration of tamarack is in the experimental stage due to the cost and difficulty of obtaining seed. Seedbed requirements for aerial, cyclone, or shelter cone seeding are as stringent as for natural seedings. Consider planting containerized seedlings grown from superior seed sources on site conversion projects or on sites where seeding has failed. Control grass and brush competition until fast juvenile growth of the seedlings allows them to dominate the site. Use of mechanical, chemical, or prescribed burning as site preparation individually or in combination must be tailored to address site specific competition and water table impacts on the new seedlings.

PEST CONSIDERATIONS

The most serious insect pest of tamarack is the larch sawfly, but the eastern larch beetle, *Dendroctonus simplex*, also can be a serious damaging insect in stands under stress. The larch sawfly was responsible for widespread defoliation resulting in growth loss and mortality in the past. An outbreak during the years 1947-1969 resulted in 300,000 acres of timber being moderately to heavily defoliated. Recent introductions and dispersal of exotic parasites have occurred. Losses since these introductions have not been significant except in isolated circumstances.

Economic losses due to wood rotters, *Phellinus pini* , *Phaeolus schweinitzii* and *Armillaria spp*., are important in off site situations, over-mature stands and where injury has occurred. Probably the most important injuries are due to abnormal water levels, both flooding or

drought.

Specific management recommendations are listed below:

1. Tamarack grows best on the same type of soils as cedar except it will grow better on more acidic soils where cedar is best on slightly alkaline soils. The management decision here is to choose between tamarack with faster growth rate and poor regeneration possibilities and black spruce with usually slower growth and more favorable regeneration.

2. Where trees have been predisposed to some damaging agent such as drought, sawfly attack, over maturity, etc., they may be attacked by the eastern larch beetle when populations build up. To help reduce conditions favoring high populations of bark beetles, remove all live, cut products from tamarack areas by the start of the growing season.

3. Tamarack is one of those species for which many of the management recommendations may not be too reliable at present as much research is yet needed to determine optimum rotation ages, regeneration techniques, etc.

WILDLIFE CONSIDERATIONS

Marginal deer habitat and poor moose habitat due to limited amounts of associated ground vegetation in closed canopy stands. Mature stands provide excellent great gray and great horned owl habitat. Small cuts, retention of snags and dispersal of cutover areas are beneficial to numerous nongame species inhabiting the tamarack community.

PREFERRED SITE CONDITIONS

Tamarack is typically managed on wet mineral or shallow organic soils. Key factors in site productivity on organic soils are:

- origin and decomposition of organic material.
- depth of organic material.
- characteristics of the water system feeding the rooting zone.

Best growth on organic soils occurs on moderately to well decomposed material (dark brown to blackish) that contains many fragments of partially decomposed wood fibers and has mineral soil in the rooting zone or a water system that is carrying nutrients from a mineral soil to the rooting zone (minerotrophic water). The surface 6" need not contain woody fragments.

Poorest growth occurs on poorly decomposed (yellowish brown) deep peats of sphagnum origin, that depend on precipitation for incoming nutrients.

Tamarack grows very well on mineral soils and is best suited to be managed on wet mineral sites or very shallow well decomposed peats. It grows well on poorly to moderately well drained sandy loam to clay soils. Productivity is best on moist fine textured soils. Avoid very wet or very dry sites.