

Timber Stand Improvement --- T.S.I.

Demands for wood and wood products to supply our growing population are mounting. The overall requirement for wood is expected to steadily increase. We also face rising demands for the other multiple-use resources of our woodlands: water, wildlife and recreation. Aesthetic quality has also become an important feature for resource management. More and more, landowners and land managers have subscribed to the practice of sustainable forestry in the management and utilization of forestlands. Intensified management and the application of measures to improve production and quality can go a long way toward meeting the needs of the woodland owner and the nation.

Using sustainable forest management, the potentials and limitations of a forest are considered and evaluated. This makes possible, decisions that lead to the production of goods and services in a combination that will best meet the needs and desires of the owner. TSI (Timber Stand Improvement) is frequently a key tool in achieving the owner's objectives.

TSI is a term used to identify various management practices designed to improve the vigor, stocking, composition, productivity and the quality of forest stands. These practices include weeding, thinning, and pruning. The main goal of TSI is to make forest management more profitable through sustained production of more and better timber products. TSI can convert a nondescript collection of trees into a dynamic working forest. TSI measures are applied to established timber stands; they provide some of the most effective ways for a forest landowner to realize a return on his/her investment. Forest owners who do not practice TSI overlook one of the most valuable forestry tools available.

Forest resource improvement projects that do not directly affect timber growth or quality are also receiving increased attention. They too are needed to increase the effectiveness of sustainable forest management. Proper buffering of water sources is aesthetically pleasing but is also beneficial to all components of the forest stand. Timber stand improvement practices should be designed and implemented not only to improve the timber resource, but to the greatest extent possible, to benefit the other resources of water, wildlife and recreation; and to meet the landowner's objectives. Fortunately, in most cases, work done to benefit one resource often proves beneficial to others as well.

Just as an unattended garden seldom produces bumper crops of vegetables, so does a neglected forest seldom produce its potential of high-value timber. One of the major problems in forestry today is how to improve the quality of logs that are needed to supply wood-using industries. This is particularly true of the fine quality hardwood species that are capable of being grown here in Northwest Pennsylvania.

Measures to improve timber quality and production can include:

1. **WEEDING** young stands to remove unwanted species and make more room for higher value trees.
2. **THINNING** to relieve overcrowding and increase the growth rate of crop trees left as the residual stand.
3. **RELEASE** of vigorous young potential crop trees for faster growth and better quality by killing or removing overtopping trees.
4. **PRUNING** the lower stems of selected trees to produce knot-free timber for sawlogs and other products.
5. **CULL TREE REMOVAL** to make available growing space occupied by deformed or defective trees that are not commercially marketable.
6. **GRAPEVINE CONTROL** to reduce vines that are damaging tree crowns.

For further information, or to request the services of a forester, please contact:

District office: DCNR, Bureau of Forestry, 323 N. State St., North Warren, PA 16365

Phone: 814-723-0262

Local office: DCNR, Bureau of Forestry, P.O. Box 125, Pleasantville, PA 16341

Phone: 814-755-4334