

## REFORESTATION EFFORTS ON STATE FORESTS

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As a forester working almost exclusively on conifer reforestation areas, I have come to realize some benefits that the average person does not perceive. Softwood plantations provide vegetative and annual diversity that contrast with the naturally occurring hardwoods. Plantations provide unique wildlife habitat. There are 14 species of breeding birds that probably would not occur on State Forests if these large conifer blocks were not present. Softwoods are an important resource to wood using industries. Red pine provides the raw material for log homes, telephone poles and lumber. Spruces and firs are harvested as pulpwood to produce paper products. From a philosophical perspective, plantations create an aesthetically pleasing environment, enhance recreational opportunities and because they are evergreen, provide a psychological boost in fall and winter when everything else seems gray.

Reforestation today is much, more complex than in the early 1930's when open fields and pastureland were being planted. The management of reforestation areas is being complicated by the age of these early plantations. What are the proper management techniques needed to convert a mature plantation to a site ready to be replanted to seedlings? Three experiments have been

**conducted to try to answer this question.**

The first is a 1983 prescribed burn in Chenango County. Forty-five year old spruce trees were clearcut. After the trees were removed, 3-4 foot high piles of slash remained. The slash was burned. The fire consumed enough material so that the site could be easily replanted. The following spring red pine seedlings were planted on an 8 x 8 foot spacing. Two months later, briars, golden rod and other woody material invaded the site where slash buildup was light. Upslope where the slash was heaviest, grasses invaded. Today, 7-8 foot aspen dominate the lower slope while red pine dominate upslope. No herbicides were applied after the burn. The red pine is having a difficult time surviving under heavy competition. As a side note, in 1986 the state legislature passed a law prohibiting prescribed burning.

In a second experiment, a mature red pine stand was harvested in Otsego County. The summer before harvesting the undesirable understory of beech, striped maple and briars was sprayed with herbicide using backpack and truck mounted equipment. Harvesting began in the fall. Upon completion the site was bare with the slash being piled. In the spring, red pine transplants were hand planted on an 8 x 8 foot spacing. This year an epidemic number of pales weevil invaded the pine slash and stumps. The weevils also began feeding on the bark of the newly planted trees and have killed half of them to date.

**A third experiment using natural regeneration was conducted in Northern New York. Strips were cut in a mature stand of White Spruce. After logging the strips were bulldozed and treated with herbicide. Natural spruce reproduction was noticed the following**

summer. After two years the density of the seedlings is variable. Height growth is about 3 inches and competition is beginning to shade these trees.

The experiments discussed have been conducted by foresters interested in perpetrating conifer plantations. This is a new challenge for us. We must adopt a reforestation policy that will coordinate and utilize the expertise of nurserymen, chemical companies, university research and experience from other state governments.