



NORTHERN HARDWOOD NOTES

What To Do With Northern Hardwood-Aspen Mixtures

The aspen type covers the most area in the Lake States, followed by northern hardwoods. Both prefer good soil and are easy to regenerate. Because of past cutting practices, though, the types are now mixed over large areas. Usually there is an overstory of fast-growing aspen interspersed with an understory of dense hardwoods.

Choosing the Future Stand

Normally you are better off encouraging a single type than perpetuating a mixture. By first deciding which type you want to favor, you can avoid the half-way measures that lead to low yields, loss of site productivity, and future problems.

Overstory Aspen, Understory Hardwood

In this mixture, you can easily encourage either type.

To encourage aspen, completely remove the overstory (all stems 1 inch in diameter and larger). Leaving even 15 square feet of basal area can reduce future volume up to 40 percent. Next cut or poison the northern hardwood understory. This stimulates root suckering of aspen by warming the soil. The subsequent rapid growth of suckers allows aspen to dominate the new stand. Take care not to disturb the parent root system. Aspen suckers are completely dependent on this root system at age 6, and still 50 percent dependent at age 30.

To encourage hardwoods, start removing the overstory as described above after the understory hardwoods reach sapling size (1-3 inches d.b.h.). If you start when they are larger than that, the future stand will be more variable in density and thus lower in quality and volume. Leave the understory intact to maintain its dominance and composition. Although some seedlings will be broken when the overstory is removed, these seedling-sprouts will grow faster and tend to maintain a uniform crown cover. The few aspen suckers that develop generally won't change the composition or dominate the northern hardwoods.

Aspen and Hardwoods of Equal Size

This is a more difficult stand to manage. Wait until volumes are great enough for a merchantable cutting. Otherwise cutting will reduce the site productivity for a few decades.

To encourage aspen, clearcut all species to stimulate suckering. You can also combine clearcutting with burning or shallow scarification if aspen stocking is very low (i.e., less than 20 to 30 square feet of basal area). This will provide a suitable bed for aspen seed. Even if there is no seed available within the stand, prescribed burning or scarification will result in stands both of seedling and sucker origin.

To encourage hardwoods, mark the stand according to the hardwood stocking guides for even-age management. Although some aspen will necessarily be retained through at least one cutting cycle, the increasing density of hardwoods will inhibit aspen suckering. Suckers arising the first 4 years usually die in the increasing shade; after that aspen stops suckering.

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