

What Does the Emergence of the Hardwood Low-Grade Market Mean for the Woodland Owner?



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The above question is one that many woodland owners are wondering in today's timber markets. The best answer for this question is: opportunity. In the special issue of *The Forest Focus* newsletter, we discussed the new opportunities that exist in the hardwood low-grade markets. We briefly showcased the opportunities available for: woodland owners, timber buyers, mills, loggers and consumers. With this article we want to expand on the woodland owner opportunities.

In Pennsylvania, more than half of the state is forested—about 17 million acres! Pennsylvania woodland consists of three primary owners: private, state and federal. In Pennsylvania, 70% of the woodland is owned by private individuals. Private woodland owners own their woodland for a variety of reasons: recreation, hunting, conservation, timber and water. Most state land is owned by the Department of Conservation and Natural Resources and the Pennsylvania Game Commission. This woodland is also being managed for a variety of goals. The Allegheny National Forest makes up the majority of the federal woodland in the Keystone State. Overall, approximately 30% of the woodland in Pennsylvania is government-owned.

Now, back to the primary question: What does the emergence of the hardwood low-grade market mean to woodland owners? The development of the hardwood low-grade market allows woodland owners to conduct sustainable forestry more easily and create intermediate cash flow from their woodlands. Prior to the emergence of the hardwood low-grade markets, the only feasible timber sale for most woodland owners was a sawtimber sale. Finding someone to purchase and harvest low-grade trees was very difficult because the value was so low. The hardwood low-grade could only be harvested at a breakeven or small profit for the landowner. These constraints made hardwood low-grade timber sales very difficult... nearly impossible.

When managing woodland, there are numerous management options that landowners have to choose from. The three primary silvicultural practices that landowners can choose from are: thinnings, even-aged and uneven-aged management.

The primary purpose of thinning is to improve the organization of the trees present in the stand—not regeneration. An intermediate silvicultural practice that is very effective and useful is a T.S.I. (Timber Stand Improvement) harvest. A T.S.I. harvest is a very good forest management tool to use when starting forest management on an un-managed forest. The main objective of a T.S.I. harvest is to remove poor quality trees and leave a healthy, vibrant stand.

Even-aged management is when all the oldest and youngest trees in a stand are basically the same age, usually within 10- to 20-years. Even-aged management can be conducted with various silvicultural practices. The primary methods are: seed tree, shelterwood and clearcut.

Uneven-aged management is when three or more age classes are represented in a woodlot—Seedlings (less than 4 ft. tall), Saplings (1-4 in. diameter), Pole (4-11 in. diameter) or Sawtimber (greater than 12 in. diameter). Uneven-aged management is very complex with multiple age classes across numerous tree species. To achieve uneven-aged management, periodic timber sales are needed on a continual basis.

By having hardwood low-grade markets, thinning, even-aged and uneven-aged management practices are easier to conduct, because there are markets for all the trees in the stand.

Did you Know?

The majority of woodland in Pennsylvania is even-aged. Most of Pennsylvania's woodland was cutover from the late 1800's to early 1900's. The forests that you see today in Pennsylvania, are second generation stands that regenerated after this period of time. The trees are all basically the same age.

The following is a hypothetical situation that explains how hardwood low-grade markets make for more effective forest management:

There is a 75-acre stand of mixed oaks, poplar and red maple located in Central PA. The overstory consists mainly of oak and poplar sawtimber. The understory contains a mixture of small diameter hardwoods and softwoods. There is also a high stocking of poor formed trees that are not usable for sawtimber or scragwood. The access to the property is good, but the access road needs improvement. The skid trails and landings need to be established. Overall, the property is ready for some type of commercial timber sale.

Step #1: The landowner and forester develop a management plan taking into account the landowner's goals and objectives. Together, they determine that a shelterwood harvest would be the best forest management tool to use. This type of harvest will achieve all of the landowner's goals and objectives.

Step #2: The best quality trees are marked to stay. These trees are good-formed, high quality sawtimber that will remain during the first timber sale. The residual trees will remain for five to fifteen years to provide seed for regeneration. Over the five- to fifteen-year period, these trees will increase in size creating more valuable timber/lumber.

Step #3: The trees that were not marked to stay are inventoried. These trees are primarily small diameter, poor formed, damaged or diseased. Potential buyers will utilize these trees for low-grade sawtimber, scragwood, pulpwood, firewood and chips.

Step #4: The hardwood low-grade is sold. Prior to the timber harvest all access roads, skid trails and landings are established. The hardwood low-grade timber is harvested. When the job is complete, all roads, skid trails and landings are retired. This network of roads and trails can be utilized for future timber sales.

Step #5: Residual trees provide seed for regeneration and the future stand is established. The landowner and forester determine that markets are strong for the residual sawtimber. The residual high quality sawtimber is inventoried and sold.

Step #6: Existing roads, skid trails and landings are utilized from a previous timber sale. The sawtimber is removed and the job is retired.

Step #7: The forest has been properly regenerated. Now we have an even-aged stand of trees that we must wait on to grow and produce future hardwood products.



Left: A stand of mixed oaks in Central PA. Notice the residual trees marked with blue bands. These trees will remain after the timber sale. All the trees without blue paint (hardwood low-grade), will be removed during the current timber sale. Residual trees will be harvested in a future timber sale.

Now let's recap the forest management steps that were made possible by having a hardwood low-grade market. Without a hardwood low-grade market the following steps would be very difficult to execute:

Step #2: The residual high-quality sawtimber could be left behind for regeneration and growth, because the hardwood low-grade was marketable by itself. Without the hardwood low-grade market, many of these high-quality sawtimber trees would need to be harvested to make the economics work.

Step #3: The hardwood low-grade timber could all be inventoried and included in the initial timber sale. No trees had to be left behind. The hardwood low-grade market allows all types and forms of trees to be utilized. Also, the trees have economic value and the landowner can have a positive cash flow from an intermediate timber sale.

Step #4: During this phase, the roads, skid trails and landings are established. Depending on the property, there could be thousands of dollars invested into the roads, skid trails and landings. This cost will come out of the hardwood low-grade material. When the time comes to sell the high-quality hardwood sawtimber, this cost does not need to be repeated and the landowner receives a higher price for the sawtimber.



Above: A stack of mixed logs that could be utilized for scragwood, pulpwood, firewood or chips. The majority of these logs are small diameter and poor formed.

The example that we used was very simplified and many details of the process were left out. However, the example does show that by having a hardwood low-grade market, landowners and foresters have many management options available that allow them to increase the overall forest quality, health and production. The hardwood low-grade market is a great win for woodland owners, timber buyers, mills, loggers and consumers. By having a hardwood low-grade market, we can utilize all trees that nature produces, with sound forest management practices.



Left: Members of the Forest Products Credit Team (Left to Right: Tom Gooch, Nathan Meiser, and Thad Taylor) at the WHEN Show located in York, Pa.— September 2008.

