

Bigleaf Maple Reconsidered

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Maple and alder have long been considered weeds by the Oregon tree farmer. Both are fast growing and can naturally seed in, or worse, sprout from stumps, and outcompete planted Douglas-fir and other conifers grown for future timber harvest.

The rehabilitation of alder's image from a "weed" to a desirable crop tree is now well known. Over the past 30 years, alder has become regarded as a valuable and fast-growing forest tree—log prices for alder have been comparable to Douglas-fir in recent

years. But maple? Most landowners with maple in their stands still struggle to find something positive to say about it. The litany of complaints usually center on the perceived low quality of the wood and the often annoying ability of the tree to resprout from the stump after cutting.

I believe maple has gotten a bad rap and think its wood is potentially a lot more valuable than we realize. The tree has other characteristics that may make it a bigger contributor to our forest economy in the future.

This year I set out to discover more

about maple, to test the market with logs of varying qualities, and to explore other uses for maple. The results have been surprising and encouraging.

Log values can be higher than you might think

I managed two harvests this year with significant maple. One was in Clackamas County, and of the total harvest volume of 106 MBF, more than a third (38 MBF), was bigleaf maple. I conducted this thinning myself with a small Cat and long winch line. The average delivered log price for the maple on this job was over \$700/MBF. No, that is not a typo. Maple brought more on a per thousand basis than the Douglas-fir. This was possible for a couple reasons. First, the hardwood mills seem to be just paying a little more for maple than they used to. In the spring we were getting \$600/MBF for 12"+ maple logs. By summer, this was down to \$550/MBF. Although prices for smaller diameter logs taper down pretty fast, the average is a respectable price. But what really brought the prices up was the sale of several loads of oversize maple to a specialty buyer for a delivered log price of just over \$1,000/MBF. This buyer is looking for figured grain, and cuts a variety of specialty maple products for remanufacturing, such as gunstocks and instrument blanks.

The second harvest, a combination of thinning and small patch cuts, was in Columbia County, and I laid it out and hired a shovel logger. Total harvest was 301 MBF. Maple was a smaller component of the total—about 15% (46 MBF). In this case, average delivered log price for maple was just over \$600/MBF. The stands were a little younger. The average scale diameter was lower than the Clackamas County harvest and there was a lower percentage of specialty maple. But still, maple was an impor-



Maple log loading: Ron Spanfellner loads some nice quality bigleaf maple logs for delivery.



Maple stand after thinning: Removing lower quality maple stems was the goal in this just completed thinning near Rainier.

tant part of the harvest and contributed greatly to the bottom line for the landowner.

To be fair, not all maple stands will capture these kinds of prices. These were both mature stands with better than average quality timber. The presence of some large figured maple logs brought the average log price up quite a bit. But even without the figured maple, the average bigleaf maple sawlog price was in the \$500s—better than most people would expect.

Sprouting—a potential strength

As a forester, I learned early that trees of stump-sprout origin were inherently less desirable than those originating from seed. This is purported to be due to weakness in the stem near where it joins with the old stump, either from rot or abnormal stem development.

Accordingly, on these thinning projects I frequently marked stump-sprouted maple for harvest, either the entire clump or just the poorer quality ones. In a 70-year old stand, I was somewhat surprised to find that virtually all of the stump-sprouted stems we cut had effectively compartmentalized any rot from the stump and were quite sound. This kind of flew in the face of what I had been telling landowners all these years. It got me thinking—maybe stump sprouting was not such a bad thing after all?

Coppicing (the practice of repeatedly harvesting stump sprouted trees) has been practiced in Europe and around the world for centuries. In my mind, it seemed suited to rapid production of firewood in areas without large native forests or of non-timber forest products like cinnamon, which comes from the bark of young coppiced stems of the cinnamon tree. If high quality bigleaf maple sawlogs can be grown from stump sprouts, I wonder if there is a way to harness the incredible growth potential there.

We all know that maple can sprout

profusely after cutting and that it can rapidly overwhelm any planted trees unless it is controlled. But look at it another way – here is a potentially valuable tree that can grow to 17 feet in height in 3 years! It's similar to redwood—stump-sprout redwood is a crucial part of the redwood industry now, and something Douglas-fir will never be able to attain.

When it comes to pancakes, Douglas-fir can't compare

My first job as a consulting forester was serving small landowners in northern Vermont. Some had sugaring operations, often integrating some timber harvesting in the “sugarbush”—the nice term they have for a sugar maple stand—to remove lower quality trees and to enhance the sap production. It's definitely an important part of the

forest economy and rural way of life throughout the northern hardwood region of the US and Canada.

But could it work in Oregon? Some landowners produce syrup from bigleaf maple on a hobby scale, but there are no commercial-scale sugaring operations on the West Coast—yet. Recent improvements in vacuum technology have made commercial syrup production a possibility in our region for the first time. Last year Anchor Steam, a major brewery in California, released a red ale flavored with bigleaf maple syrup. With Portland's current leading role as a food innovation hub and the increasing reliance on locally produced foods, the time may be right for a West Coast maple syrup operation.

How would this work in practice? Interested landowners with suitable stands of maple could enter into lease agreements with maple syrup producers. Enterprising landowners could pursue their own production of syrup, possibly selling to larger producers, much the same way wine grape growers sell to the wineries.

If it was easy, everybody would be doing it

The rehabilitation of alder didn't happen overnight. Some landowners still think of it as a weed! So building real value out of our maple resource may take some time and there are some definite challenges. Here are a few that I can think of:

Expensive logging. The bottom line is that logging in maple stands is slow with low productivity compared to virtually any other species in our area. The trees tend to have a relatively short bole before major branches start. So log recovery from each tree is poor. Just like with alder, potential volumes per acre are far lower than with conifers of a similar age. Some of this has to do with inherent qualities of maple—it doesn't grow much in height above 80 to 100 feet in most stands. Some of the difficulty is due to the fact that few landowners pay much attention to culturing their maple stands to enhance their potential future value. In regions with high value hardwoods, long established practices, such as harvesting poor



Deck of short maple logs: Getting enough long logs for barking can be challenging in maple.

quality trees for firewood, can greatly enhance the value of a mature stand. This almost never happens in Oregon, partially because we don't consume that much firewood, and partially because landowners don't perceive maple as worthy of the effort.

Lack of seedlings. Because the forest products industry has not embraced bigleaf maple as a crop tree in the way it has with alder, the tree seedling nurseries as a whole have not figured out how to reliably produce a high quality bigleaf maple seedling. I know this because we have planted bigleaf maple on a variety of sites over the years, and survival has been poor. Until this challenge is met, it will be somewhat difficult to establish maple stands where there isn't already a maple resource for natural seeding

and stump sprouting.

Bigleaf maple—the next Cinderella story?

Bigleaf maple could become the next alder—transforming from a nuisance tree that forest managers work hard to eliminate, to an important contributor to our forest economy. But only if it passes two tests : 1) it has to have genuinely valuable qualities and traits, and 2) people in the industry—forest landowners, hardwood lumber producers and users—need to believe in it and work to develop markets.

Based on my experiences this year, I think bigleaf maple passes the first test. It can produce incredibly beautiful wood for a variety of applications and can grow very fast. Whether it can pass the second test is up to us. ■