



Timber News for Landowners



Handley Forestry Services

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for a **FREE**

consultation

about **YOUR** tract!

Market News . . . a little more optimistic

The Market

Is good news just around the corner? That is the question. We are feeling more optimistic than we have in quite a while. The dealers we talk to are showing more interest. Also we are seeing a greater interest in quality timber.

There are two very good publications that we like to follow. These are Timber Mart South and the futures market by Random Lengths. Random Lengths is showing an increase in lumber futures over the last two months. Also the stumpage prices published by Timber Mart South has increased slightly over this period. Does this mean that we will be back to the market we once had, within the next few months?

We are not quite ready to predict that. Housing starts are still off, with a large backlog of houses still on the market. Usually stumpage prices follow closely behind the futures market for lumber. It will be interesting

to see how this plays out this time.

Pulpwood Prices

The demand for pulpwood, both pine and hardwood, continues to be strong. We are seeing some tracts of pulpwood being clearcut. We usually do not recommend this practice. The better trees should be moving into sawtimber in a very few years. On a normal market sawtimber is up to four times more valuable than pulpwood. Therefore a good thinning operation in these younger stands is recommended. The trees selected for thinning should be the poorer quality ones. This shifts the growth to the better trees, thereby producing more quality sawtimber.

As we ride the roads we see many unmanaged tracts. These usually are heavily stocked with low grade hardwoods that are not suited to the site. These hardwoods are very competitive with the pine that could be producing a much higher

value product. We are fortunate to have any market for these trees. Even though they are a low value product, we can generate income to help defray the cost of their removal and release of the higher value trees they are competing with.

The ones that will make pulpwood are valued near the same price as pine pulpwood. The others that would be considered cull, but may be sold for fuel chips or some other form of biomass. The value of these products is very low. However any value is better than having to pay to have them removed.

In conclusion, we feel that the sawtimber market recovery may still be a bit slow. However it does appear to be moving in a positive direction. Now is still a good time to take advantage of the demand for the lower value products. Thereby improving the stands in preparation for the big recovery that is sure to come before too much longer.

A Comparison of Two Systems of Forest Management

by Don M. Handley, RF

Consulting Forester and Founder of Handley Forestry Services

Much has been written recently comparing uneven and even-age forest management of southern pine forests. Since the art of uneven-age management has not been the system promoted for quite some time now, it is not well understood. Research or academia scientists have written most of what I have read. They are usually referencing research or computer models written by others that have not actually managed forestlands. Maybe it is time for some of us that have actually walked the walk to render an opinion.

The science of Silviculture “forest management” dates back hundreds of years in Europe. The forests of Germany are considered by many to be where the true science began. It came to America in the late nineteenth century, being introduced by the new US Forest Service.

Silviculture came to the southern pine region in 1928 when Less K. Pomeroy and Gene Conner formed a cooperation to purchase Ozark Badger Lumber Company and a few thousand acres in Drew County, Arkansas. They were former employees of the US Forest Service, and had made a tour of Europe and Asia to study methods of kiln drying lumber. There they were introduced to the system of “sustained yield management of forests”. This system is commonly recognized as “uneven-age management”. I was privileged to have worked, as a young lad, on the lands of Ozark Badger Lumber Company, and later for Pomeroy’s consulting forestry firm.

Under the system of uneven-age management trees are harvested from the same stand every five to seven years. And yet the stand maintains a full stocking of timber. In order to accomplish this the managing forester must know how much volume per acre is there, and what the rate of growth is. Each time the stand is

harvested a volume equal to that grown since the last harvest is removed.

The key to success with this system is the ability to establish young pine



Stand 1 has been harvested five times since 1988.

seedlings in the understory. These are to replace the older trees as they are harvested. Therefore the stand is “uneven-age” having two or more age classes.

Pine seedlings have very low tolerance to competition from hardwoods, that become established abundantly if not controlled. Labor was very cheap during the earlier days of forest management. Therefore the competition was controlled using hand labor. By the 1960s cost of labor had increased and the herbicides that had been introduced were not very friendly to the environment. Therefore the system lost favor among most landowners.

A Management Breakthrough

Handley Forestry Services was among the first to pioneer the use of the new families of environmentally friendly herbicides that have been introduced. These have made competition control much more economical. By timing our harvest cut with seed fall we are able to establish pine seedlings on the ground. We can then use a selective herbicide to control the competing brush long enough for the pine seedlings to become

established. Occasionally we need a second applications in six to ten years. But we don’t expect this to occur until the next regeneration cut, in 15 to 20 years.

At any rate it is much less expensive than preparing a site and replanting.

This gives us the next generation of babies up and growing while we are still managing the parent trees.

Harvesting Cost Comparison

Most people we talk to and certainly those we read assume that logging costs will be greater for harvesting some of the trees from an uneven-ages stand. They seem to forget that in even-age management at least two thinnings are made before the final clearcut. And when we are harvesting trees from an uneven-age tract we will be cutting much larger trees and therefore cut fewer trees to get the same volume.

When we shifted back from even-age to uneven-age management over 20 years ago, we did some assuming also. We thought we would be required to use small loggers with small tractors, and cut the trees with chain saws. We soon found that if we planned the harvest with straight skid trails and required the equipment to stay in these trails we could use very large equipment. The fellers can cut the trees and place them in the skid trail without damaging any of the remaining trees or the young seedlings. This system has proven to be more efficient and actually reduces the cost of harvesting.

Annual Growth Value

By understanding the science of forestry we realize that an acre of land is capable of producing a given amount of wood annually. If we are managing short term even-age the stand will be primarily stocked with small trees. Therefore the growth will be pulpwood of the small sawtimber, called chip-and-saw. On a good market these products sell for ¼ to ½ the value

(continued on next page)

A Comparison of Two Systems . . . continued from page 2

per unit of higher quality sawtimber.

By allowing the very best trees to remain on the land until they are approximately 20 inches in diameter the majority of our annual growth is much higher quality sawtimber.

By permission of the landowner we will share information from one of the better stands that we manage. It is on the John Livingston Land Company in Scotland County North Carolina. This tract is designated as model forest

by the Forest Guild. This is stand 1, consisting of 45 acres. It is an old field that was planted in 1967. The first thinning was done in 1988. As of 2008 it has been harvested five times for a total income of \$171,958.59. In 1998 we applied a herbicide to control hardwood competition, at a cost of \$4,320.00. We are still carrying an inventory of approximately 315,000 board feet of high quality sawtimber and a full stocking of young trees that

will be thinned for pulpwood within the next few years. *See table below.*

Stand 1 is part of a 206 acre pine tract that was not as well stocked over all when we started. A total of \$430,758.16 has been harvested from the entire tract since 1988. It is now fully stocked with good growing stock and contains more volume than when we started.

In conclusion we recognize that good forest management is truly an art. It is also a very profitable business.




Two Different Methods . . . Very Different Results . . .

When starting from bare land, there is actually very little difference in uneven-age and even-age management until the time of the third cut. Under the even-age system this is when you would harvest all the trees and go back to bare land to start over. Up to that point both systems would have had a low income pulpwood thinning and a thinning of pulpwood and small sawtimber.

The uneven-age plan would have controlled the competition and established new seedlings at about the time of the second thinning. These seedlings will make up the next age class to replace larger trees as they are cut. The volumes harvested would be approximately equal to that grown since the last sale.

The tables below compare the two systems based on actual records from 45 acres of the John-Livingston tract in North Carolina between 1988 and 2010. We are using the same values for the first two thinnings. And the final harvest is based on a cruise and growth projection we made, for the even-age final harvest.

When considering just the income during the first short term rotation at final harvest, the short term looks good. However, the time of final harvest is just at the time the uneven-age forest is coming into its prime. The second rotation will be no contest.

Uneven-Age Management <u>vs.</u> Even-Age Management							
 Sales		 Expenditures		 Marketable Timber Remaining in 2010			
Actual Case History of Stand #1 on John Livingston Land Company				If we had chosen 30 year rotation even-age management. The final harvest is based on a cruise made in 1995.			
Year	Activity	Cost	Gross Income	Year	Activity	Cost	Gross Income
1988	First pulpwood thinning		\$ 15,188.00	1988	First pulpwood thinning		\$ 15,188.00
1993	Small sawtimber sale		\$ 35,367.11	1993	Small sawtimber sale		\$ 35,367.11
1997	Sawtimber sale		\$ 49,148.24	1997			
1998	Herbicide application	\$ 4,320.00		1998	Final harvest @ age 30		\$ 112,500.00
1999				1999	Prepare site & replant	\$ 7,740.00	
2003	Sawtimber sale		\$ 40,650.00	2003			
2008	Sawtimber sale		\$ 31,605.24	2008			
2010	SUB TOTALS	\$4,320.00	\$ 171,958.59	2010	SUB TOTALS	\$7,740.00	\$ 163,055.11
			<i>Marketable timber presently in 2010 inventory</i>				<i>Marketable timber presently in 2010 inventory</i>
			\$ 77,000.00				\$ 0.00
TOTALS		\$ 4,320.00	\$ 248,958.59	TOTALS		\$ 7,740.00	\$ 163,055.11
Uneven-age Mgt. ⇒		\$244,638.59		Even-age Mgt. ⇒		\$155,315.11	



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Looking To The Future Of Forestry



*Is this 30 year-old stand mature? Should I harvest it and start over again with planted seedlings?
Those are the questions. See the comparison of two management systems, page 2.*

**Call us! We love
to “talk timber”.**



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