

DRIVING OF HARDWOOD LOGS.

A Successful Experiment in the Eastern States.—Experiences and Opinions of Canadian Lumbermen.

The question of driving hardwood logs is just now receiving more than usual attention, on account of what is claimed to be a successful experiment conducted during the past summer by certain lumbermen in Maine. It is understood that an entire drive of hardwood logs safely reached its destination, the logs by sinking not being more than in the case of pine and spruce. It seems that the logs were cut during the summer of 1900. They were then skidded, hauled upon the snow the next winter, and sent down the river in the spring. In the meantime they became seasoned, causing them to float. The seasoning process, it is understood, is facilitated by allowing the trees to lie for a week or so after felling before cutting them up into logs, as the leaves before drying up will draw nearly all the nourishment from the trunk.

The opinions of some Canadian lumbermen as to the successful driving of hardwoods were solicited, and are given below:

J. P. NEWMAN, Wiarton, Ont.: I have never had any experience in driving logs, but we raft hardwood logs from 30 to 60 miles in a loose boom. From the experience I have had in rafting hardwood logs I should think it would be a hard matter to drive them, as we find it very difficult to raft them unless it is with some lighter timber to which we can dog or wire them, as there is always a large percentage of the hardwood logs that will sink unless they are so floated up by lighter timber. In reference to cutting hardwood logs from the tree one season and holding them over until the next to season, I have found that unless hardwood logs are manufactured the same season they are taken out they will doze from six inches to two feet on each end, and to prevent this we always make it a point to have our hardwood logs all cut out, as nearly as possible, by the first of September (rock and soft elm excepted.) I might say that not nearly so many logs sink if they are left on the shore six weeks or two months after spring opens.

A. HAGAR & CO., Plantagenet, Ont.: We have had very little experience in the matter, but we once bogged some hard maple and birch logs to be rafted and delivered at our mill. The party got out some, but failed to deliver them, and we drove them the next year ourselves and were very successful, they being seasoned for a year. We only drove them a distance of about forty miles, but we did not lose one by sinking. Of course, there were only a small quantity, and we cut them up as soon as they arrived at the mill.

J. D. IRVING, Buctouche, N.B.: I have driven hardwood logs, all kinds, for the past fifteen years. They must be peeled the year before driving, and dried out fairly well. Of course, the drier the better, if they are to be on a long drive. They drive far better than spruce; in fact, when you drive them with spruce they will run out ahead of the spruce and your drive will work much better. For instance, when logs begin to pin, if you can get any move out of them the hardwoods will be sure to go, whereas with spruce alone you frequently have to work them little by little until you get a good run out of them. The hardwood, as you may know, becomes as slippery as an eel as soon as it goes into the water. Regarding keeping them afloat any length of time, mine have been driven about 10 to 15 miles to a main rafting ground, and I have frequently had them remain in the raft all summer, in which case I throw a stop across the rafts and pin them to it. I always raft them with spruce or hemlock, which hold the hardwood in the manner I have stated. I always watch mine, and when I see any beginning to sink pin them up. I think as a general thing they will remain above water without any trouble for two or

three months, after that they begin to settle. My rafts come into salt water, which is, of course, a shade stronger than fresh. Anyone taking out a large drive of hardwood would have to avoid getting them stuck in the stream over summer, in which case they should be hauled or rolled out to dry. If they remained in the water over winter they would scarcely drive next spring. I cut away an old mill dam a couple of years ago, and in the bottom of the pond there were about 200 hardwood logs. They have been there about 20 years or more. I am having them hauled out on the bank to dry and drive next spring. They are as sound as the day they were cut in the woods.

THOS. A. PICKARD, Mar, Ont.: During the six years I was in business in Owen Sound, we cut from one to one and a half millions each year, all hardwood, and rafted all our logs. As to the success of rafting hardwood, we give it as our experience that if the water is smooth there is not more than 10 per cent. loss in rafting maple, beech and birch from forty to sixty miles, with logs cut during the winter and rafted the following summer from June to August. Have had no experience in running them on a stream, but in case of being caught in a sea you are sure to lose from 50 to 100 per cent. I don't think holding logs until the following season is practical, for if they are not in the water by August following the winter they are cut, they will spoil at the ends very quickly. We never adopted any method to keep them afloat, simply rolled them into "bag boom" and towed away at the rate of from one to one and a half miles an hour.

C. H. WITTHUN & CO., Wiarton, Ont.: Our experience with hardwood is that it cannot be successfully driven in small streams. We raft our hardwood logs after letting them dry for about four to six months, and then the best of the logs, "butt logs," will sink. The success of safely landing them at the mill depends entirely on the weather—if nice and calm we may get off with a small loss, but if rough we run large chances of losing more than twenty per cent., and if we are not very careful to keep in sheltered water, the chance of landing any of them is exceedingly small. Then there is another drawback. If hardwood lays too long on the beach in the summer time the logs get dozed on ends, and the lumber is not worth within two dollars per M of what winter cut hardwood is worth.

J. R. BOOTH, Ottawa.: I have never had any experience in the floating of hardwood logs in the way you mention; but to give my opinion I do think they would float if cut and laid up for summer for a short distance or until they became water soaked; but the greatest difficulty would be, I fear, in the sap wood becoming dozed in the warm weather, which I have found to be the case in some few I had left over in the woods by sleighing breaking up early in the spring before I got them out. I found all the logs that the heat of the sun got at were more or less sap dozed, whilst the bottom logs in the rollway were quite green, and I think would sink if put in the water the same as if put in from the stumps. Two years ago I put in the water 42 birch logs as an experiment, and only one of them reached my mill, and this one was in the water three months and barely floated; the rest I never saw sight of.

KING BROS., Quebec, Que.: We have had very little experience in driving hardwood logs and are unable to make any suggestion, but the writer, in the course of conversation with some people coming from the lower provinces, gathered that the most successful plan had been found to deprive the trees intended to be cut of the bark to the extent of three or four inches in width all the way around the bottom of the tree, the effect of which is represented to be that the tree dies without injuring the fibre of the wood, and when cut the following year the tree is found drivable, that is, the wood is so dry that it will float without sinking.

W. J. TRENOUTH & BRO., Powassan, Ont.: The only hardwood logs we have driven is ash, elm, basswood and birch. Ash, black and white floats well. Basswood will float until the water gets warm. Rock elm floats well; soft elm will float well if it is good timber but a poor quality will sink. Birch will only float a very short time and we find it is the poor quality of it that sinks. We have been told that if the birch is peeled it

will float, but we never tried any experiments in floating hardwood logs, but believe they will all float better if peeled.

J. & T. SCOTT, Allan's Mills, Ont.: We have been driving hardwood logs for a number of years, and would say that the logs are more successfully driven when they are cut a year before, but we sometimes cut them in the winter and drive them in the following spring, pinning cedars to them by means of 1½ inch oak or rock elm pins. A cedar log 6 inches in diameter at the small end will float an oak log about 18 or 20 inches.

THE ORILLIA EXPORT LUMBER CO., Orillia, Ont.: We have had considerable experience in the handling of hardwood logs, and we do not think that it would be practicable to cut them one season and float them the next. We will not say that they might not float, in fact we think that they would, but we think they would be so badly damaged by laying over, as to make them unfit for lumber and not worth much for anything else. It is a well known fact that hardwood logs such as we get here, with the exception of elm and ash, are materially damaged if they lay out of the water after the month of July following the winter they were taken from the tree, as after that date they deteriorate very fast.

A. & P. WHITE, Pembroke, Ont.: We have never had any experience in the driving of hardwood logs, but would be glad to know what steps can be taken to successfully accomplish that end, as we have a large quantity of hardwood on our limits, which is practically valueless unless we can devise some method of getting it down the river without sinking.

J. & T. JARDINE, Kingston, N. B.: We have had some experience with hardwood logs. We peel the bark off the trees and let them dry all summer, and the next spring they float all right. Some parties claim that the best way is, after the tree is peeled not to cut off the top until the fall when you commence hauling. They claim that the sap goes up into the unpeeled top, and thus lightens the butt of the tree. When logs are peeled we think there is no trouble driving them.

A. TAIT, Orillia, Ont.: Have no experience in driving hardwood logs, but feel quite certain that to cut and to hold hardwood logs over until they dry would render them useless for any manufacturing purposes.

CHEW BROS., Midland, Ont.: We have never undertaken the driving of hardwoods, outside of ash and basswood. This class of timber, if banked till driving season opens, can be driven the same season without any loss. Any hardwoods that we have sawn, such as oak, maple, beech, birch and elm, have not required to be driven, only towed, and in order to prevent such logs from sinking, we invariably resort to rafting as is customary in the trade. Our experience has been that it does not pay to risk towing without, as the loss sustained by logs sinking would much more than cover extra expenses incurred in rafting. Of course, this method would not apply where logs have to be driven down a stream, in which they would be likely to get broken up. We have not, in course of our lumbering operations, found it necessary to experiment in this connection, as principal part of our output is pine and floatable timber.

SNIDER LUMBER CO., Gravenhurst, Ont.: In reference to the driving of hardwood logs such as oak, birch and maple, we find that cribbing them is the safest and best way to drive them. Basswood and ash will float for a few months without losing any by sinking, while soft elm will float for some time. We have peeled soft elm logs in the spring, and after leaving on the bank for several weeks before dumping them found they floated high for several months. We think that cutting hardwood logs the previous season and allowing them to season would spoil them, as we find by leaving them on the bank until July the ends will be dozy from 1 to 1½ feet into the log. This is especially the case with basswood, birch, maple and beech, and cutting them a year in advance would, we think, render them useless.

N. & A. DYMENT, Thessalon, Ont.: We think that if