

XI. Paying Loggers

How do you pay loggers to cut wood? The question might seem strange, given that loggers have been paid to cut wood for generations. Why ask now? Because the more common payment systems have neither served the loggers nor the forests well.

Traditionally in Maine, loggers operating chainsaws and skidders have been paid on a piece rate--by the cord. The goal has been to encourage production. Production means getting the wood out fast. The more a logger cuts, the more he makes. Logging equipment has also been designed for production. Today's dominant technologies--feller-bunchers, grapple skidders, and delimiters--can move a lot of wood fast. While the contractors who own the equipment are paid by the cord, some of the operators of these machines are paid hourly wages, like factory workers, although they are paid a fraction of what paper-mill workers get.

But look at the woods. Something has been forgotten in the name of productivity of extraction; the productivity of the residual forest. Too much land gets taken up in trails and yards to accommodate the machinery. Too many residual trees get damaged. Too often the result doesn't look much like a forest. As John Arbuckle said, "You get what you pay for." If you want to reduce residual damage and manage for a well-stocked, high-quality forest, you have to pay the logger appropriately.

The question of logger payment systems is important to the Maine Low-Impact Forestry Project. We are interested in results on the ground that lead to long-term benefits for the landowner, but also compensate the loggers for the efforts to reach such a result. In Hancock County, we are in the early stages of setting up a landowners' association. The association could, potentially, improve marketing of wood by using a concentration yard, or even set up value-added opportunities, such as saw milling and kiln drying. Improved marketing might offset some of the added short-term costs of more careful logging.

The survey

To help brainstorm better payment systems, I sent out a logger-payment survey to selected foresters and loggers. It was not my intention to get a statistical sample and then choose a system based on majority preferences. Rather, the survey was designed to find out how individuals, who see themselves as careful stewards, deal with logger payment issues, and to ask them for ideas and advice.

I started by asking the respondents their status (loggers, foresters, or landowners), the scale of their operations, and the type of equipment they use. Those from different perspectives might favor different payment options.

I then mentioned two possibilities for who might sell the wood. The landowners might sell the wood to the loggers-who then cut it and sell it to the mills. Or the landowners can retain ownership of the wood and (with the help of foresters) sell the wood themselves. In Hancock County, a landowner association would probably favor the second option.

With any payment method, there is an opportunity to encourage better practices with incentives. Landowners might want to encourage loggers to leave better residuals (and do less damage), do better bucking and sorting (to increase product value), or be more productive at cutting wood. Payment incentives include:

- ▲ job security (long-term contracts or right-of-first-refusal on next cut),
- ▲ monetary incentives for exceeding standards, or
- ▲ monetary disincentives for poor performance (i.e., penalties or loss of job).

I suggested that there are four basic situations that loggers and landowners might face--and each one might call for a different payment system:

- 1) high-value cut in easy logging conditions;
- 2) high-value cut in difficult logging conditions;
- 3) low-value cut in easy logging conditions; and
- 4) low-value cut in difficult logging conditions.

With higher-value wood, the logger would be doing a *revenue cut*. With lower-value wood, the logger would be doing more of an *investment cut*. With an investment cut, the landowner might make little or no money if the logger is adequately compensated. The landowner might still choose to pay for such a cut if the forester thinks the future stand will be more valuable. With low-value wood on a poor site with rough terrain, the landowner might decide that it is not worthwhile to cut at all.

I listed five possible payment methods, and for each one listed some considerations:

- 1) *By product and grade (standard piece rate)*. While a piece-rate payment encourages productivity and good sorting, it can also be an incentive for high grading and stand damage. This may mean more costs for supervision or for remediation. With low value stands, a logger might not get adequate compensation for his work. Because of pressure to get wood out fast, this payment system can lead to a higher accident rate.
- 2) *Straight rate by volume (or weight) regardless of grade*. A straight rate creates less incentive for highgrading. Because the logger is still paid by the piece, there is still an incentive to rush, which can lead to accidents. With a straight rate, the logger might not get adequate compensation cutting small wood in rough conditions. The logger and landowner might want to negotiate a different price depending on the wood and the conditions.
- 3) *Per time (hour, day, or week)*. A wage per time would have to account for labor and equipment. With a payment by time, there is less incentive for highgrading and accidents, but there is also less incentive for productivity and proper bucking and sorting. Payment by time assures that the logger is adequately compensated regardless of the size of the wood and the condition of the terrain.
- 4) *Per area (by the acre or by the lot)*. This system is often used for precommercial thinning. Payment would have to be based on the average size of trees, the stocking, and the difficulty of cutting. This system, like other piece-rate systems, creates an incentive to rush and may require more supervision.
- 5) *By formula*. In Scandinavia, foresters have computer software that takes into account stocking, percent removal, average size of trees, difficult trees, slope, roughness of terrain, yarding distance, and performance requirements. While this sounds complicated, the forester can type in the numbers for these variables in a matter of minutes and come-up with a per-cord payment system. The trick is to have an accurate formula based on real data about performance in all these situations. Such a formula has not been created for Maine, however.

I asked the respondents to choose which payment system (with incentive modifications if desired) would be most appropriate for the four logging situations. Finally, I left space where

respondents could leave any comments. These comments, based on experience, were the most important part of the survey.

Results of the survey

The survey was sent to a small group of foresters and loggers who have experience doing higher-quality management. I was pleased to get nearly a dozen responses. The respondents included loggers, landowners, and foresters. Some were all three. They used all types of equipment ranging from horses to single-grip mechanized harvesters. They worked on small woodlots and ownerships in the thousands of acres.

Few of the respondents had experience with a formal incentive system, but most had recommendations ranging from logger performance bonds, long-term contracts, fines, and monetary incentives.

Except for payment by area, every payment system got an endorsement from some respondent for some situations. Managers of large areas (who could offer employment security) preferred straight payment by volume or weight, regardless of species or grade. Many of the other respondents suggested a variety of payment methods, depending on the wood and logging conditions.

Interpretation of results

This was not intended as a scientific poll--the point was to get ideas and to learn from others' experiences. While I was hoping to get strong guidance towards the "best" payment system, instead, the variety of responses led me to a different conclusion: the system is not as important as the result. When the logger and landowner come together to negotiate a price, the landowner needs to make sure that the logger does a high-quality job at a reasonable price. The logger needs to make sure he makes a living--regardless of what is cut and the conditions of the forest.

It is possible to tinker with all the methods to ensure the desired results:

- 1) Landowners can accept reduced stumpage payments to take into account the logging conditions and the extra efforts needed to reduce damage.
- 2) The straight-rate per volume could be modified based on logging costs and conditions.
- 3) Payment by hour could be modified with financial incentives and disincentives to encourage quality, productivity, and value.
- 4) Payment by area could be modified depending on the conditions and the quality of performance.
- 5) Payment formulas could be devised that assure that loggers can earn a living regardless of conditions.

This conclusion leads to others:

- ▲ Loggers need to know their costs under different logging conditions.
- ▲ Foresters need to accurately describe the wood and logging conditions. These should be a standard part of the cruise.
- ▲ Loggers, foresters, and landowners need to negotiate a payment method based on the above information.

▲ Regardless of the payment method, the results should be similar - otherwise someone will not get a fair deal.

For a landowner association, such as the Maine Low-Impact Forestry Project in Hancock County, it would be desirable to eventually come up with a single method that is less confusing. The association would benefit, however, even if multiple systems are used if landowners, loggers, and foresters keep careful records of costs, benefits, and general results. Such records would be crucial to a logger referral service. A logger with a good record and satisfied customers will be in demand and can get a better price.

Ultimately, all methods need to ensure that the logger makes a living wage and can pay for his machinery (or horse). If this is not the case, loggers will avoid low impact logging contracts. The simplest method to achieve that result would be to pay for loggers and machinery by time with clear job requirements and incentives for excellent performance. Even with this system, the logger has to be able to calculate how much the machinery is worth per hour (or day).

The next challenge for the MLIFP is to come up with a work sheet to help loggers calculate their costs given their type of equipment, the type of wood to cut, and the logging conditions. This would enable clear negotiations with landowners, regardless of payment methods.

With Low-Impact Forestry, initial cuts are often of low-value wood, leaving the best quality trees behind to grow and fill the forest. Low-value wood often goes into chips to be turned into commodities, such as pulp. Mills, through a variety of techniques, have been able to keep their purchase price for raw commodity wood low. Some landowners are overcutting now, flooding the market. The pulp market is depressed globally, due to overcapacity. In addition, the global market can, through artificially cheap shipping, supply chips from places like South America, to compete with Maine wood. This that means there is little money to be shared by landowners, loggers, and foresters involved in managing such stands. This has created tensions when loggers or landowners feel shortchanged for their efforts.

When the wood is cheap, what produces it becomes cheap as well. This leads to cheapened forests, cheapened workers, and cheapened communities. A full cost accounting would lead to prices reflecting the cost of producing the product in a more sustainable way and giving adequate compensation to the producers. The economics of low-impact forestry will improve as the economic system is reformed.

Selected comments

The following are some of the comments from respondents:

⟨ "Performance incentives would be a very positive addition to the equation. A payment system that takes into account all the variables involved in a harvest would be a sound point from which to negotiate a contract between logger and landowner. The gross price for a specific volume of wood (MBF, M lb, cords, etc.) is information that the landowner, logger, and forester need to share openly. From this mill delivered price, deductions are made by the parties involved based on mutually agreed on debits and credits from within a payment formula." (logger)

⟨ "Have owners compete to hire the best logging crew--set a true market price for a logger." (forester)

⟨ "Pay \$15/hour base plus XX/MBF to encourage production. Give 10% extra for minimizing stand damage" (forester)

- < An incentive for loggers is "reasonable assurance of an average production over the operating year. Workers are paid salary." (forester)
- < Payment by time sounds like an employment relationship. Therefore worker's compensation insurance is required under Maine law." (forester)
- < "I have tried to explain to landowners the hidden costs of harvesting. A higher bid does not guarantee a good job. That is why it is important to view past jobs of contractors or to get references." (forester)
- < "I think #5 (formula) is a good idea if and only if the landowner is educated on exactly what they are getting for their investment in the process." (logger)
- < "Stumpage prices as a % of mill delivered would encourage utilization. Hourly pay to loggers would allow them the time to do a good job. An additional incentive based on some measurable unit could be added. e.g.. a (?)% bonus if (?) % or less of the residual stand has damage smaller than a credit card." (forester)
- < "I used to get good results for owners and loggers when the logger was hired to land product roadside and was paid by owner (usually a forester) by the day.... I have used bonus incentives and penalties in many of my contracts over the years... (one) incentive was land base (opportunity for long-term work). Stumpage prices were negotiated every year and were based on a percentage of mill price. No bonus." (forester)
- < "There are several ways to get to the desired result. None will work without honesty, trust, and clear and almost continuous communication. Much easier said than done. I have numerous horror stories to tell..." (forester)
- < "How do you make 'stewardship contracts' (right of first refusal for other cuts) legally binding to control forgetful landowners?" (forester)
- < "Try to get logger to actively participate in negotiation (how much will it cost them to cut as marked, as specified in advance) then add bonus/incentives for smart marketing (exceeding average price/MBF for example)." (forester)
- < "I require loggers to control/limit residual damage to less than 10%--that is a contract requirement just like putting water bars in. Good work means job security and a returned performance bond. Bonuses are only paid for active marketing; then on a % basis. Performance bond would balance logger's short-term interest with landowner's long-term interest." (forester)