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TECHNICAL RELEASE

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IMPROVING LOG TRUCKING LOGISTICS

Trucks/Trucking: efficiency/productivity

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INTRODUCTION: Researchers at Auburn University, under contract with the Wood Supply Research Institute (WSRI), explored ways to improve the productivity, safety, and cost of the trucking portion of the wood fiber supply system. One important topic addressed in the study is log trucking logistics. Past studies were reviewed to determine the “state of the art” in transportation logistics and to look for new opportunities for improvement in the wood supply system. Current practices were observed to evaluate the effectiveness of various methods in use and interviews were conducted to assess logger and trucker attitudes. Here are the key findings:

LOGISTICS DISCUSSION: The number of loads a logger can deliver is typically constrained by receiving mills to a weekly maximum. Managing the supply chain (i.e., logistics) by loggers consists of delivering wood to mills as quickly as possible during the week to guard against any potential events that might interrupt the flow of trucks. Once a load is lost for the week, it can never be regained, and that money is lost to the logging company. It’s no wonder loggers are very possessive of their trucking resources.

Key observation: Coordinated delivery of loads is not optimized for logging operations in the South to the extent that it has been in other countries—or in other U.S. industries. Over-the-road trucking companies, for example, use very sophisticated load- and route-optimization technology to reduce delivery times and total unloaded miles of their trucking fleets. Coordinated log trucking is used in other countries, such as New Zealand, Chile, and the Nordic countries, that pool their trucking resources under the “control” of a log truck dispatcher.

BENEFITS OF COORDINATED TRUCKING: Results from simulation experiments evaluating coordinated versus traditional log truck utilization indicated that the shared approach could reduce the number of trucks required to move the same amount of wood by 20 percent. Another factor that could make “pooled” trucking more attractive is fuel cost savings; preliminary study results indicate that unloaded miles could be reduced by 10 percent. In addition, if logging could achieve a 5 percent increase in payload and in loaded miles, then log trucking accident rates would be reduced by 3 fatalities, 71 injury crashes, and 154 property damage/towaway crashes each year. For more safety information, please see the report entitled *Let’s Talk Trucking: Safety and Driver Management* (available free to FRA members as a Technical Paper at www.forestresources.org/MEMBERS/tech-papers/techpapers.htm).

In our survey of loggers throughout the U.S. South, we found some evidence that pooled transport systems are being implemented with some success. The biggest hurdle: *loggers don’t want to give up control over their fleets*. How could coordinated trucking evolve in the U.S. South and other regions?

THREE POSSIBLE SCENARIOS: The use of coordinated trucking systems could be stimulated by one of the following actions:

- 1) Consuming mills requiring that all wood is to be delivered by an “approved” transport contractor;
- 2) Loggers joining together in a transport cooperative; or
- 3) Wood dealers, or another trusted third party, offering the coordinated transport service to all loggers under contract.

Of these scenarios, the third is most realistic. An example of such a system was found in North Carolina and, at least from the wood dealer’s perspective, was working quite well. This outcome resulted despite dispatch being coordinated “by hand,” with no use of optimization technology.

The other scenarios described above are not very likely to happen in practice. In the first case, in which consuming mills mandate pooled trucking, the responsibility for making the system work would fall entirely on the wood consumer and would require additional personnel and investment in logistics technology on par with that of a fairly large over-the-road trucking firm. With respect to the second scenario, it is unlikely that loggers would have enough trust in any cooperative system to relinquish control over their trucking.

SUMMARY: A detailed report entitled *Let’s Talk Trucking: Log Truck Logistics* is available free to FRA members as a Technical Paper at www.forestresources.org/MEMBERS/tech-papers/techpapers.htm. During interviews, loggers expressed a great deal of resistance to the idea of coordinating log transport. Publicizing “success stories” is perhaps the best method for stimulating the adoption of pooled transport logistics in the wood supply chain.

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