Recent research and entrepreneurship in log trucking

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Independent logging firms throughout Georgia express common concerns and frustrations with respect to log trucking. These include:

- Hiring and retaining qualified and dependable drivers;
- Balancing trucking capacity and needs over time;
- Absorbing cost increases associated with rising fuel costs;
- Managing paperwork and accounting associated with contract haulers; and
- Failing to take advantage of backhauls and temporary market opportunities.

These concerns have real business impacts. Georgia boasts over 1200 logging contractors and wood suppliers transporting over 35 million tons of wood to over 128 mills and pulp facilities (Master Timber Harvester 2005; Forisk Consulting 2005; Spelter and Alderman 2003). The costs associated with these activities are considerable, often representing half of the delivered cost of wood fiber in the South (McDonald et al. 2001). This implies that modest efficiency gains could produce meaningful cost savings.

In other states around the country and in other parts of the world, entrepreneurs have tackled this effort to improve efficiency by de-linking trucking and logging. Sun Chasers of Creswell, Oregon, operates a trucking dispatch service for owner operators that fields orders from loggers each afternoon for trucks needed the following day. Bill and Betty Farley own and operate Sun Chasers. Bill, an owner operator himself, had long helped fellow drivers and loggers line up hauling for harvest operations. During the days, Bill continues to haul logs while Betty coordinates and manages activity from their home office for all drivers participating in their system. Sun Chasers negotiates pay rates, and handles collections, random drug testing, paperwork and payments for 6 to 20 drivers at any given time.

Harvest Haul of Magnolia, Mississippi, owns and operates 40 trucks and hires all drivers while Weyerhaeuser handles the dispatching. Currently, the system delivers 640 loads per week (approximately 3.5 loads per truck per day) delivering to primary Weyerhaeuser sawmill locations at McComb, Holden, Silver Creek, and Bogalusa. An example of the most advanced systems is that operated in Finland by the Metsalitto Group, which uses centralized “transport centers” and GIS-based data systems to coordinate the delivery of over 20 million cubic feet of wood per year by truck, rail and barge.

Mendell et al (2006) evaluated the potential gains from shared log trucking resources in a central Georgia. Pine-using mills in this operating region consume 5.6 million tons of logs and 6 million tons of pulpwood annually (Forisk Consulting 2005). Three logging contractors – Bunn Logging, Hill Logging, and Quality Forest Products – agreed to participate in a real-time study to collect the data required. This effort tracked 18 log trucks from six logging sites to 15 destinations over five days. The project simulated a centralized dispatch system in Excel using actual inventory and loading/unloading data from the field.

Table 1: Comparison between dispatch model and field results (model minus actual)

	Difference
Delivered loads per day (Monday-Thursday)	0
Loaded miles per day	4.27 %
Total miles per day	-655 miles (36 miles per truck)
Hours worked per day	-0.92 hours (55 minutes per truck)

On average, the dispatch model resulted in the same volume of wood delivered in fewer hours while driving fewer miles (Table 1). Specifically, results indicated the same volume of wood could be delivered with 0.92 fewer hours (55 minutes) per truck per day and 36 fewer miles driven per truck per day, with estimated daily cost savings for the 18-truck system of $500 to $750 per day, mostly associated with reduced fuel and labor costs from working fewer hours and driving fewer miles.

Again, log transportation often comprises over one-half of the cut-and-haul cost of extracting wood raw material from the forest, and over one-third of the delivered cost of wood in the cases of lower valued products such as pulpwood. Any opportunities to increase loads delivered with the same resources, or deliver the same amount of wood with reduced resources positively impacts the cost structure of log harvesting activities.

In an ongoing project at the University of Georgia led by Professor Dale Greene and sponsored by the Wood Supply Research Institute, Hamsley et al (2006) evaluated weight data from 79,760 truckloads delivered to 24 southern forest products mills in the fall of 2005 to assess opportunities for improving trucking efficiency by reducing the variability of gross, tare, and net weights. They compared the mean gross vehicle weights at each mill to the federal weight limit of 40 tons and to any stated mill overweight policy. Overall, they found that wood suppliers and mills with less variable payloads tended to have higher payloads. Operating at the reduced variability level of the benchmark groups across the 221 million tons of roundwood annually consumed in the U.S. South suggests that $100 million of savings are potentially available. Results indicate that (1) mills can control their gross vehicle weight distributions by enforcing overweight policies, (2) suppliers can achieve maximum hauling efficiency if they consistently haul fully loaded trucks, and (3) lighter weight trucks correspond to higher payloads.

Improved utilization of trucking assets leads to fewer trucks on the road and higher margins for industry participants. While gaining the full benefits of sharing log trucks can be difficult in practice, the central challenges come from cooperative efforts across logging firms. Onequestion for contract loggers becomes, “what opportunities exist to share truck resources with fellow loggers that you trust?“

Literature Cited

Forisk Consulting. 2005. Forisk mill database of wood using facilities. Available through the Wood Demand Report at www.forisk.com

Hamsley, A.K., W.D. Greene, J.P. Siry, and B.C. Mendell. 2006. Improving Timber Trucking Performance by Reducing Variability of Log Truck Weights, working paper.

Master Timber Harvester database, updated March 31, 2005. Hosted by the Center for Forest Business: http://warnell.forestry.uga.edu/warnell/cfb/db/

McDonald, T., S. Taylor, and J. Valenzuela. 2001. Potential for shared log transport services. P. 1115-120 *in* Proc. of the 24th Annual Council on Forest Engineering meeting, Wang, J., et al. (eds.). Council on Forest Engineering, July 15-19. www.cofe.org

Mendell, B.C., J. Haber and T. Sydor. 2006. Evaluating the potential for shared log truck resources in middle Georgia, Southern Journal of Applied Forestry, 30(2): 86-91.

Spelter, H., and M. Alderman. 2003. Profile 2003: softwood sawmills in the United States and Canada. USDA Forest Service Research Paper FPL-RP-608. 81 p.