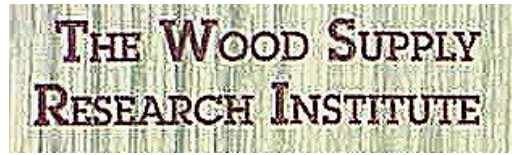


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Planning and Communication: State of the Forest Industry and Opportunities for Improvement in the Wood Supply Chain

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Executive Summary

During 2001, Virginia Tech Forestry Operations researchers completed a study to assess the current state of planning and communication in the industrial wood supply process and to identify opportunities for improvement. A literature review, a ‘brainstorming’ session and a mail-out to industry experts provided the basis for a series of structured questionnaires. On-site interviews were performed with 169 individuals representing all segments of the wood supply system from Texas to Maine. Study highlights regarding the current state of planning and communications are:

Current planning in the wood supply process is primarily reactive rather than proactive, resulting from extremely short planning horizons for many key segments of the wood supply chain. (See *Critical Review* section for relevant statistics). This is due in part to the high degree of uncertainty facing the forest and logging industries in today’s business climate, but is also a result of a continuation of traditional business practices that can introduce inefficiencies in the wood supply chain.

Frequent, short-term changes in mill wood requirements, including delivery schedules, inventories, and specifications, drive many of the downstream constraints to planning in the wood supply system. Thirty-five percent (35%) of the wood procurement organizations interviewed reported that the consumption mix at their mill often changed on a weekly basis, and 65% reported they typically receive only one or two week’s notice in advance of significant changes in mill wood requirements.

Communications technology (cell phones, “Southern Link” system, etc.) is facilitating frequent verbal communications between all segments of the wood supply chain. However, utilization of this technology is also a factor in reducing the planning horizons for loggers. Micro-management is occurring in some areas as consumers adopt and use these technologies to actively control daily (rather than weekly or monthly) wood flows, and “just-in-time” inventory management goals. While 60% of the loggers interviewed reported they communicated at least twice a week or more with their wood dealer or procurement forester, 70% reported that these communications were only ‘somewhat’ or ‘not helpful’ in planning their production goals.

More than 75% of the contract loggers interviewed are informed about the location and characteristics of the next tract they will harvest less than one week in advance. This common and wide-spread industry practice of delaying critical information to loggers with regard to tract allocation creates a barrier to effective operational harvest planning, and provides one of the greatest opportunities for substantial cost savings (See *Planning Opportunities* section).

Compensation rates for logging contractors are primarily determined through the application of consumer's logging cost models or dealer's established 'market' rates (70%). Little true negotiation for important harvesting system and production-related items other than trucking occurs (See *Critical Review* section). These models are generally based on projected 'average' production rates that may not accurately reflect all-to-frequent consumer-imposed constraints such as quota reductions, additional unanticipated or mandated moves, or tract allocation 'mismatches'. Simple production monitoring and recording of key productivity factors by loggers would help facilitate consistent and meaningful rate setting. It will also improve the contract loggers' ability to conduct meaningful long-term business planning and provide an incentive to maximize system efficiency (See *Planning Opportunities* section).

Study highlights identify the following planning opportunities and 'benchmarks' as having the greatest opportunity for improving efficiency in the overall wood supply system (for more detail and other opportunities, see *Planning Opportunities* section):

Efficient and predictable wood flow is critical to a stable and profitable forest and logging industry. Mill management and wood procurement personnel should work together to plan their wood requirements, inventory and delivery schedules on an annual basis and effectively communicate these plans to the appropriate loggers to facilitate their ability to conduct meaningful long-term strategic and tactical planning.

Loggers should receive at least 30 days notice from consumers regarding any substantive changes in wood requirements. This benchmark should serve to allow for effective short-term tactical wood supply planning, including tract allocation, wood flow scheduling and inventory management.

Consumers (and dealers where applicable) should provide contract loggers with at least two weeks advance notice regarding the location and characteristics of the next tract they will harvest. This should serve as a benchmark to allow for effective operational harvest planning, including access, road requirements, landing locations, cutting schedule and water quality protection.

The current business environment generally dictates that loggers maintain maximum operational system flexibility (the 'crescent wrench' approach) to enable them to constantly react to continuous short-term (daily or weekly) market fluctuations and relocation. Consumers should strive to provide consistent, stable markets and communicate wood supply plans that facilitate logger strategic planning and system development. Gains can then be made from harvesting efficiencies, with the optimum harvesting system available and matched to the range of sites and conditions.

In summary, this study concludes that: (1) suppliers, and consumers to a lesser degree, are currently operating with an excessively short planning horizon; (2) improvements in planning and communications can result in substantial gains in efficiency and reduced

costs in the wood supply process; and (3) these gains will not likely occur without an increased level of cooperation in the wood supply planning process between all parties involved – consumers, dealers, and loggers.

This report focuses on issues currently present in the wood supply industry. It is the hope of the researchers that all parties in the wood supply system will realize the substantial benefits that can accrue from implementing key recommendations on planning and communications identified in this report, and work together to remove the constraints and provide the necessary information to make it a reality. Most of the conclusions and suggestions made in this report can be adopted with little additional investment on the part of the affected party.

Study Timing

It should be noted that the timing of this study reflects a depressed period in the forest industry. During the summer of 2001, the forest industry was marked by reduced mill consumption, poor market conditions and large inventories of purchased stumpage reflecting past (inflated) prices, and removal of consumption from the market. Consumers were under pressure to decrease cost, while logging contractors were dealing with wood quotas and unusually high fuel and consumable prices. These factors may have influenced the attitude and responses from the study participants.