

CHARACTERISTICS OF WEST VIRGINIA LOGGERS DURING ECONOMICALLY DIFFICULT TIMES

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Abstract.—West Virginia licensed loggers have been surveyed over the years regarding their business, operational, and personal characteristics. An update of this study was completed in 2009 to illustrate the impacts of the current economic conditions on the forestry and forest products industries. Additionally, this survey will help demonstrate the preparedness of the logging workforce to embrace emerging biomass markets that have potentially different workforce needs from traditional logging. A paper-based mail survey questionnaire, with an online option, was mailed to 625 licensed loggers; the questionnaire included questions regarding general harvesting, company arrangements, equipment and technology, and demographics of the owner/manager. These data will be summarized and compared to previous West Virginia logger surveys.

INTRODUCTION

As one of the most forested states in the United States, West Virginia has had a long history of land management, logging, and forest products production (Yarnell 1998). Loggers are a key component in the forest product supply chain as they fell trees, move the logs to the landing, load them onto trucks, and deliver them to the primary processing facilities. Current downturns in the forest products market (Buehlmann and others 2009) have decreased the demand for logs and logging services. Without reliable and profitable work, many loggers have moved away from forestry for opportunities in other industries, as illustrated by the drop in the number of West Virginia timber licenses from 1,030 in 2007 to 622 in 2009.

As logging businesses adjust to the current market conditions, those that are still working have downsized and found a different mixture of jobs, such as land clearing and oil and gas site work, or merely parked their equipment to await an industry turnaround. These conditions are very different from those in the mid-1990s, when demand increased based on large, new investments in the processing industry (Luppold and others 1998). In the early part of this decade the industry struggled somewhat (Milauskas and DeGeorge 2003), but the current economic downturn has far exceeded the previous downturn.

Logger studies have been conducted in West Virginia and other eastern states over the years (Luppold and others 1998, Milauskas and Wang 2006). To assess the impacts of current market conditions and continue to develop a better understanding of the demographic, economic, and operational characteristics of the logging population, periodic surveys have been planned and implemented. This project was designed to characterize many of the components of logging businesses in West Virginia. These results are a critical tool for forestry educators, researchers, and industry professionals to understand current conditions and develop programs and opportunities to foster healthy logging businesses.

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METHODS

A current list of licensed West Virginia loggers was obtained from the West Virginia Division of Forestry in April 2009. An initial survey questionnaire was mailed out in the spring of 2009 to 625 licensed loggers. Included with the questionnaire was a cover letter informing the potential participants of their rights regarding human test subjects. The West Virginia University Institutional Review Board and the U.S. Department of Health and Human Services requirements were followed. Potential survey respondents were informed that the survey was voluntary and that the results from any individual would be kept confidential. Postage-paid return envelopes and a sticker with the words “WV Logger and Proud of It” were included with the questionnaire. The sticker was a token of appreciation for spending the time and effort to fill out and return the survey, as suggested in the Tailored Design Method (Dillman 2000). Follow-up postcards were sent to all loggers who did not respond to the survey to attempt to further encourage their participation. The participants were also given the option of filling out and submitting the survey online. A Web-based duplicate survey was designed to provide a fast and simple method for them to provide their information. Participants could choose between the online and the paper survey questionnaire.

The questionnaire contained 51 questions, which were based on the survey used in 2002. Many of the questions concentrated on obtaining detailed information on West Virginia logger business, educational, and operational characteristics in order to better understand the typical logging contractor. Survey responses were collected into digital files for analysis. Summary statistics were calculated for the questions pertaining to general harvesting, company organization, equipment and technology, and owner demographics.

RESULTS

After the first mailing of the survey, 70 responses or 11.2 percent of the surveys were returned. Of these, 22 responses were from licensed loggers who do not own or manage independent logging businesses, but were required to hold logging licenses by the state of West Virginia. These organizations are typically processing facilities, log yards, and other companies that do not actively harvest timber. The remaining 48 responses (for a 7.7-percent response rate) were completed by independent logging business owners—the target survey respondents.

Owners of logging businesses averaged 49.8 years old and had been in business for 18 years (Table 1). Twenty-two percent of the owners were 40 years or younger in age, and more than 70 percent have been in business for over 10 years. The majority graduated from high school (54.3 percent), 17.4 percent have completed some college courses, and 17.4 percent graduated from college (Fig. 1). These businesses had an

Table 1.—Summary statistics for logging firms in West Virginia.

	Median	Mean	Standard deviation	Minimum	Maximum
Owner's age (yr)	50.5	49.8	11.8	24.0	73.0
Years in business	17.5	18.0	12.1	0.0	50.0
Work hours per week	40.0	41.6	9.5	10.0	60.0
Work weeks per year	51.0	49.4	5.5	30.0	55.0
No. of workers in the woods	2.0	2.9	2.3	1.0	12.0
No. of truck drivers	1.0	1.8	1.4	1.0	5.0
Total no. of employees	3.0	4.6	4.8	1.0	23.0
No. of certified loggers	2.0	2.1	1.3	1.0	8.0
No. of crews	1.0	1.3	1.0	1.0	7.0

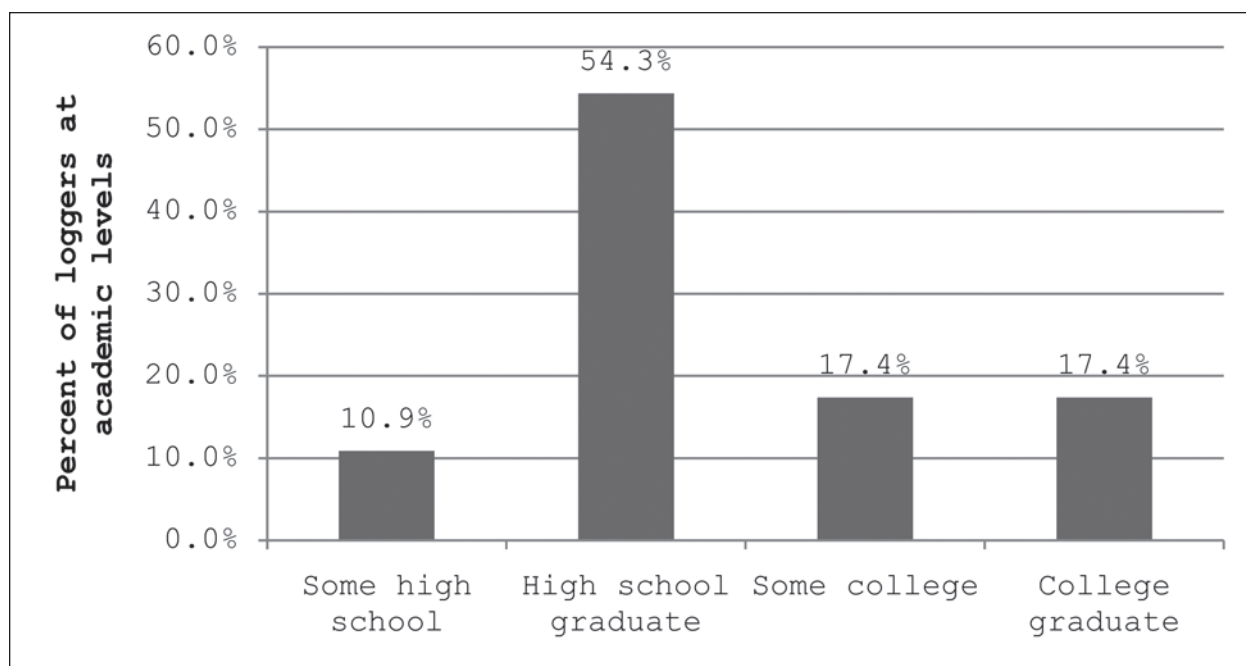


Figure 1.—Academic level of owners of West Virginia logging businesses.

average of 2.9 workers in the woods, 1.8 truck drivers, and 4.6 total employees; they averaged 1.3 crews per respondent. These crews had been trained in CPR/first aid and many (an average of 2.2 per business) were family members. Additionally, an average of 2.1 employees were loggers certified by the state of West Virginia. The West Virginia Forestry Association was the most popular professional organization with 47.9 percent of loggers possessing membership, while 14.6 and 2.1 percent of loggers held memberships with the Mountain Loggers Cooperative Association and the Forest Resources Association, respectively.

Loggers reported that they purchased their own stumpage 34.3 percent of the time (Table 2). The trucking and hauling of forest products was primarily completed with logger-owned and -operated trucks (61.0 percent). Survey responses also reported that loggers attempted to negotiate additional payment for their logging services 72.9 percent of the time in order to cover rising fixed and variable costs of their operations. Twenty percent reported that they were successful all of the time and 77.1 percent were successful some of the time. If logging rates, or the amount loggers were paid per MBF, were increased, half (50.0 percent) responded that they would purchase new equipment (Table 3). Fifty-eight percent would repair existing equipment, and smaller percentages of 27.1 and 12.5, respectively, would hire additional employees or make improvements to shop and office facilities. Logging within the framework of forest certification programs is low; the largest number of loggers (37.5 percent) provide logs to Sustainable Forestry Initiative (SFI) buyers, and fewer (8.3 percent) to Forest Stewardship Council (FSC)-certified facilities.

Unfortunately, increasing logging rates and certification programs have not been enough to save a large number of employees in the logging workforce from losing their jobs. Twenty-five percent of loggers responded that they laid off more than half of their employees (Table 4). Another 10.0 percent reduced labor between 25 and 50 percent, and 4.0 percent cut between 10 and 25 percent. While 27.0 percent of

Table 2.—Response percentage values for timber purchasing and logging rates.

	Percent ^a
Timber purchased by logger	34.3
Timber purchased by others	71.2
Timber hauled by owned trucks	60.1
How often do loggers negotiate logging costs	72.9
Always successfully negotiate	20.0
Sometimes successfully negotiate	77.1
Never successfully negotiate	2.9

^a Percents do not add up to 100% as these results were averages of all responses and each question was asked individually.

Table 3.—Response percentage values for business preferences if logging rates were to increase.

	Percent
Repair existing equipment	58.3
Buy new equipment	50.0
Hire additional employees	27.1
Shop or office improvements	12.5

the loggers cut back 10 percent or less, many included in this category still had job losses. Another difficulty loggers face is the requirement to make workers' compensation payments. West Virginia privatized its workers' compensation insurance system in 2006, creating an opportunity for new programs and potential savings to the logging business. However, this potential savings has not yet arrived for most loggers: only 20.8 percent reported a decrease in their workers' compensation rates (Table 5). Some 18.7 percent of loggers reported increases in their rates. The average workers' compensation rate was 31.7 percent; the median was 31.5 percent (minimum of 0 and maximum of 85 percent).

The profitability of logging businesses during 2009 was reported as very poor or poor by 50 percent of the respondents (Fig. 2). Only 13 percent reported results that would be considered good or excellent. When participants were asked about expected profitability in 2010, the percent of loggers responding good or excellent was 4.0 percent, while the number expecting poor or very poor results was 57.0 percent.

DISCUSSION

The 2009 survey had a higher usable response rate (7.7 percent) than the previous survey of 2002 (Milauskas and Wang 2006, with rates of 4.9 and 6.2 percent, respectively). The number of licensed loggers in West Virginia decreased dramatically from the previous surveys, so while the percentage of loggers replying increased, the raw number of surveys returned was slightly lower. The logging business owners in this survey also are slightly older on average and have been in business for an amount of time similar to those in the previous surveys. The largest number of owners are now in the 51- to 60-year-old group, up from the 41- to 50-year-old group reported in the previous survey, and the proportion of younger loggers remained steady.

Table 4.—Response percentage of logging businesses in downsizing category as a result of current economic conditions.

	Percent
Less than 10 percent	27.1
Between 10 and 25 percent	4.2
Between 25 and 50 percent	10.4
Over 50 percent	25.0

Table 5.—Response percentage values for workers' compensation insurance rates after privatization.

	Percent
Increased significantly	10.4
Increased	8.3
Did not change	20.8
Decreased	20.8
Decreased significantly	0.0

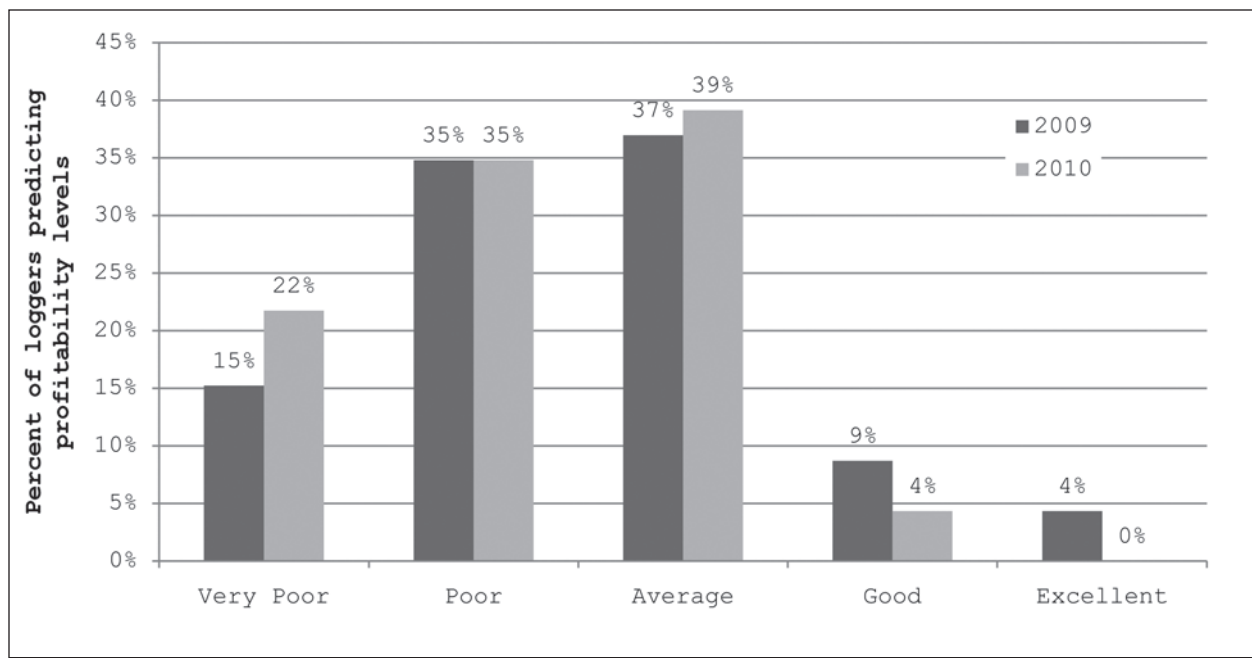


Figure 2.—Profitability in 2009 and expected profitability in 2010 for West Virginia logging businesses.

Comparing the education levels between the two time periods indicates nearly a 10-percent drop in the number of owners with a high school diploma, but a 20.8-percent increase in the number of loggers with some college credit or a college degree. This increase in the educational level of loggers could be attributed to greater efforts to increase higher education enrollment (Chenoweth and Galliher 2004).

The configuration of logging businesses also has changed in the past few years. With a large number of logging businesses and employees no longer actively logging, the drop in the number of workers in the woods (from 4.8 to 2.9) and total employees (from 8.0 to 4.6) between the 2002 and the 2009 surveys is not a surprise. Many loggers run family businesses and the employees that are often first eliminated from the payrolls are not the family members during these difficult financial times. Illustrating this point is a slight increase in family or related employees per logging business, from 1.4 in 2002 to 2.2 in 2009.

Another difference between the two surveys is the decrease in the amount of timber being directly purchased by the loggers. In 2002, loggers indicated that they purchased 41.0 percent of the timber they harvested, as compared to 34.3 percent in 2009. Timber purchases tie up capital needed to maintain operations, so many loggers have increased their reliance on the timber industry and other purchasers to finance the timber purchase. Unfortunately, many of these purchasers also face very difficult markets and financial situations. To complicate the relationship between the logger and timber purchaser, 72.9 percent of loggers reported attempting to negotiate payment rates for their logging services, up from 58 percent in 2002. The success of these negotiations, from the loggers' perspective, has improved as they reported not being successful only 2.9 percent of the time, improving from 15.0 percent from the previous surveys. As the number of loggers keeps decreasing, the demand for their services increases, allowing for some negotiating leverage; however, the scale and true relevance of these additional concessions by the purchaser are not currently known. Trucking activities by logger-owned trucks has remained constant at 61.0 percent.

Half of loggers reported that if the base or negotiated logging rates increased, they would purchase new equipment (54.0 percent in 2002 and 50.0 percent in 2009) and the number of those reporting they would hire additional employees increased from 10 to 27.1 percent between surveys. This large change in the number of loggers looking forward to hiring additional labor is an indicator of the very lean staffing many loggers have maintained during the current economic downturn. This outlook may reflect the start of a shift to increase staffing, contrary to the previous trend of decreasing staffing and replacing workers with advanced equipment when economic conditions improve. While the potential for productivity improvements with new equipment are still important, the reluctance to hire additional employees has decreased.

Loggers have begun to incorporate practices that comply with forest certification programs. While 2009 is the first year these data were collected, the SFI program was much more widely used (29.2 percent more) than the FSC program. Certification programs have benefited some loggers as the demand for certified wood has been slightly better over the last couple of years than for noncertified products. Given the much smaller size of the certified market in comparison to noncertified markets, the benefits of the certification programs to the broad logging population have not yet become ubiquitous.

Healthy logging businesses are a crucial component of the forest products industry as they provide the raw material to the primary and secondary processing facilities. The depressed forest products market has had an impact on the logger population in West Virginia. Results from this study offer valuable current and comparable information to the industry and other parties interested in developing programs that can specifically support and strengthen this portion of the industry. With a strong pool of professional loggers and abundance of raw materials, West Virginia is poised for a recovery in the broader wood products industry.

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