

Treated Wood Post Awareness Campaign
Characterization of the Small Roundwood Industry

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Prepared by

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The University of Montana School of Forestry
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Purpose

The purpose of the **Small Roundwood Industry Characterization Study** is to provide information to enhance the understanding of this segment of the forest products industry in the Western United States. Specifically, information about the numbers and sizes of the various manufacturing and treating operations, and their raw material and production was sought in order to quantify the contributions of a historically unstudied, but important, segment of the forest products industry. Information regarding the raw material source and species, production and treatment methods, marketing and markets were collected in order to ultimately develop an accurate database for use in the **Treated Post Awareness Campaign**. This campaign will strive to maintain and expand local and regional markets for treated and untreated roundwood products as well as educating buyers of treated wood products about the importance and recognition of quality-treated products.

Background

A small interview study conducted by U.S. Forest Service marketing and utilization personnel showed that the small roundwood, also known as the “post and pole” (P&P), industry has seen its market share, production and employment levels steadily decreasing since 1990. Supply of lodgepole pine, the principal raw material, has been markedly reduced in the last ten years, as a large proportion of the supply of this species is from federal timberlands, especially National Forest lands in the states north of 35° latitude. This informal research also brought out anecdotal evidence that posts that were not treated in accordance with American Wood Preservers’ Association Standard C-5 were making up an increasingly larger share of the market, failing in service and turning longtime treated wood users away from a long-accepted product.

In order to best understand the magnitude of this decrease in activity in this locally important sector of the small diameter wood-using industry, data describing the amount and type of raw material, products, processes and direct employment needed to be developed for each of the states in the western U.S. region. It was recognized that treated wood products included much more than lodgepole pine roundwood less than 8” in diameter. Plants whose primary function is to preservative treat the wood, generally handle all types of sawn and roundwood products, of which post and poles are generally only a portion of the annual production. Some operations both manufacture posts from either whole trees or cut-to-length sections ready to be peeled, dried and treated on-site,

using one or more of several types of treating methods and preservative chemicals. Typically, most U.S. production of treated posts utilizes pressure treating with chromated copper arsenate (CCA), while a few use either dip or pressure treatments with either pentachlorophenol (penta) or copper naphthenate (CN).

This study reports the results of interviews of manufacturers, manufacturers/treaters and treaters of roundwood products less than seven inches in diameter. Its results show the number and size of operations accounting for an estimated 80 percent or more of the industry's production in 11 western states, as well as the amount and type of raw material used and roundwood production. Information on the import of Canadian treated and untreated roundwood products, assembled by Larry Swan of the U.S. Forest Service, is also utilized in the presentation of the results of this effort. Ultimately, these findings accompany those of Marilyn Williamson, outlined in the portion entitled "Market Research Findings and Recommendation".

Methodology

Fifty telephone interviews (see Appendix II), conducted between November 2001 and March 2002, were conducted with three types of manufacturers. One group was made up of those companies producing peeled but untreated roundwood and members are referenced throughout the report as "manufacturer". The second group was made up of companies that both peeled and treated (manufacturer/treater), while the third was those companies that only treat or treat following a small amount of machining, such as drilling holes for a rail fence, pointing or capping, to add value to the product prior to treatment (treaters). Some questions were of a qualitative nature, determining information on company location, species used, availability of raw material, ability to compete in different markets, machinery used, while others were quantitative in nature. Specifically, the survey attempted to quantify and separate a mill's current and maximum-capacity production into four different size classes of products (2-2.9"; 3-4.9"; 5-6.9"; >7"), quantify the dollar-value of the different products and services and quantify employment contributions.

Every attempt was made to include as many companies in the survey as possible, with the understanding that not all would be reached or participate. Given the reported production of the participating companies and the estimated production of those not included in the characterization, it is conservatively estimated that approximately 80% of the output of each of the states was accounted for. Company names were obtained from the Intermountain Roundwood Association's (IRA) and the Western Wood Preservers Institute's (WWPI) records, from roundwood products wholesalers and from other companies participating in the survey.

The lack of information regarding the post and pole industry became very clear upon initiation of the telephone process, because, in addition to a general lack of information regarding the details of the industry throughout the west, much of the fundamental information regarding the location and status of companies was not obtained from the existing lists. Several companies had gone out of business since these lists were first

compiled sometime in the past few years, and some new companies were not known of. The first benefit of the project was to be the identification of extant businesses and produce an up-to-date, improved list of companies engaged in this segment of the industry.

Responding companies were asked to supply estimates of their raw material use, volume of products in number of eight-foot length equivalents in each of the size classes for both treated and untreated material. They were also queried about their current staffing level, as well as their estimated maximum production. Manufacturer/treaters provided this information for products produced and sold both treated and untreated (often referred to as bright or white). Qualitative topics included markets location and type of product, end user, outlook for raw material supply and sources of the most competitive roundwood producers. Table 1 identifies and locates the companies interviewed.

Table 1. Location and Number of Participating Companies by Company Type

State	Manufacturers	Manufacturer/Treater	Treater
Washington	1	2	0
Oregon	3	0	2
California	1	0	3
Arizona	2	0	1
Nevada	0	0	1
Utah	0	0	1
Idaho	2	1	1
Montana	5	4	0
South Dakota	0	3	0
Wyoming	2	2	0
Colorado	2	1	4
New Mexico	0	0	1
TOTAL	18	13	14

The characterization questionnaire (Appendix I) used in this study was designed with the assistance of the Treated Post Awareness Campaign Steering Committee and Intermountain Roundwood Association member companies. Preliminary drafts of the questionnaire were reviewed and edited by the cooperators and the final format approved by the entire steering committee. The questionnaire typically took 60 –90 minutes to administer, with responses and notes then entered into spreadsheet format for analysis and graphic representation. Charts depicting the results of the survey accompany this report.

Results and Interpretation

Estimated Production by Manufacturers and Manufacturer/Treaters

The telephone interviews provided estimates of each state’s amount of treated and untreated roundwood product manufacture. Again, plants were categorized by process

and product and were broken into three major groups; manufacturers, manufacturer/treater and treaters. Estimated total production of treated and untreated roundwood is estimated to have been approximately 60,000,000 linear feet in 2001, and is shown by state and size class in Chart 1. The total reported values for each state were assumed to represent an estimated 80% of the state's total and were adjusted to show an estimate of the state's total production. Of all the western states, Montana led production with an estimated 21,000,000 linear feet, with Oregon and Wyoming contributing a total 23,000,000 linear ft. between them. These three states accounted for approximately 2/3 of the region's total 2001 post and pole production of over 60,000,000 linear feet.

It is clear that the two intermediate size classes, 3"-4.9" and 5"-6.9" account for a large majority of the production of each state. Montana, Oregon and Wyoming, however, show a sizeable production of the smallest-diameter products, 2"-2.9", primarily in the form of dowels for tree props and undowelled pieces for furniture manufacture. These three states account for the majority of the production of this size class, most likely because of the suitability of lodgepole pine and, more recently, Douglas-fir and western larch, for these uses.

California, Utah, Nevada and New Mexico have a relatively small manufacturing base in small roundwood products, with little or no manufacturing taking place. Arizona has more roundwood production than these 4 states, and utilizes ponderosa pine exclusively, since lodgepole pine, western larch and suitable small-diameter Douglas-fir are not native.

The largest size class, 7"+, represents a very small percentage of any state's or the entire region's production due to the fact that this size material is much more suitable, and valuable, as small sawlogs than as post and pole material. Utilization of this large diameter as posts is quite limited, and generally represents a minor sales volume for any particular company.

Estimated Production by all Types of Producers

When all producers' contributions are tallied, nearly 125,000,000 linear feet of post and pole material was produced and/or treated then sold in 2001. While this counts imported bright posts and double-counts most domestic bright posts that were produced by plants that only manufactured, it is important to see what is actually done to fence posts and other small roundwood in the western United States.

First, Nevada, Utah, California and New Mexico, are states that have little roundwood manufacturing taking place, and whose contribution, both large and small, is in the form of treating of bright posts brought in from other states or Canada. As Chart 2 graphically indicates, California, Colorado, Idaho, Nevada, Utah and New Mexico are primarily "treater only" states. These six states import a large amount of untreated products from other states or Canada, treat them and sell them either in the immediate area (California) or ship them to those high volume use, agricultural areas (Nevada, Utah, Colorado, New Mexico and Idaho).

It is also interesting to note that a significant portion of Montana's total production comes from plants that both manufacture and treat, and that only a small number of other plants, located primarily in South Dakota, Wyoming and Colorado, also manufacture and treat. In addition to treating their own production, nearly all manufacturer/treaters reported that they manufacture more than small roundwood products, and are active in production of lumber, poles, ties and other primary products. They also serve as service treaters for other manufacturers. While the treating capacity of these manufacturer/treaters is sized for the white production capacity, the ability to provide both bright and treated posts to the local and regional markets is a distinct marketing advantage.

Plants that do not treat, however, are not as capitalized and are not burdened by the environmental and technical constraints the manufacturer/treaters and treaters are with regards to the treating operation. The greatly decreased level of technical sophistication and capital expenditure required in treating operations is eliminated, and the plant can be sited in a smaller, more environmentally sensitive and less expensive location.

Plants that do not manufacture the posts, but merely treat them, also have distinct advantages. First, the treating process can be much more flexible, with a wider variety of products that can be treated. Not just posts are treated, but lumber, poles, plywood, oriented strand board (OSB) are processed at these plants. Their ability to concentrate on products with higher monetary recovery rates, and their ability to treat as a service only greatly increases their flexibility in the market and decreases the need for capital outlay for purchase of inventory for resale.

Raw Material Source

The survey collected data describing the source of the raw materials for each of the three segments of the wood post and small roundwood industry. The manufacturers and manufacturer/treaters received their raw material primarily as tree-length, delimbed stems or, in far smaller volumes, as cut-to-length pieces with the bark on.

The trend in raw material form has been toward tree-length input for the last decade for at least three primary reasons. First, feller-buncher technology has progressed to the level that small log harvesting often employs mechanized felling on steeper slopes, lower stocking levels and smaller diameters. Second, concurrent to the development of equipment suitable for small-diameter harvesting has been the curtailment of small-acreage timber sales set up primarily for post and pole harvest. Typically, small-diameter trees, suitable for post and pole manufacture, are separated from the other; larger trees removed during sawlog and plywood peeler operations, and delivered to the small roundwood manufacturer in tree-lengths. The third primary reason for the shift from cut-to-length to tree-length raw material input has been the dramatic decrease in the number of post cutters specializing in removal of that size class of tree. The first two factors have, undoubtedly, decreased the opportunities for an enterprising individual to build a business with a minimum amount of capital investment. Without sales set up specifically

for the removal of this material with a minimum amount of equipment, the once ubiquitous post cutter has disappeared from most of the West's forests.

Looking to Chart 3, of the raw material coming into the manufacturing facility, most is coming from a combination of private non-industrial forestland and U.S. Forest Service timberland. Private industrial land supplies a smaller percentage of the total primarily due to the low percentage of these lands in much of the post and pole producing areas of the region and because of a tendency to have limited holdings of small diameter lodgepole pine, ponderosa pine and Douglas-fir. Some states, such as Colorado, derive very little of their raw material from Federal timber lands, while others, such as Oregon and Montana, still rely on Forest Service timber for a portion of their raw material supply. Some states, such as Oregon, Idaho, Colorado and California, rely on Canadian imports of untreated posts to supply their treaters. Very few of the producers of roundwood products harvest timber from their own lands. Tribal and State-managed timber also provide only a minor amount of raw material in the region, however, tribal timber generally is the sole raw material source for tribally-owned roundwood manufacturing or manufacturing/treating operations.

Utilization of species other than lodgepole pine has increased in the past ten years. Douglas-fir has been increasingly utilized, primarily for furniture stock and non-ground contact applications. New treatment technology may provide a means of treating refractory woods such as Douglas-fir and western larch, and open these otherwise acceptable species to the post and pole industry. Some areas of the region, such as eastern Oregon, have abundant supplies of quality materials, and with improved methods of obtaining suitable treatment for these hard-to-treat species, may experience a growth in the small roundwood industry.

It is clear that while untreated Canadian roundwood is a relatively small portion of some state's raw material source, it is a major component of the region's raw material supply, accounting for over one third of the total amount of material used in 2000. While several domestic manufacturers reported that they had difficulty in obtaining raw material to maintain operations at current levels, let alone increase production, others reported no problems in obtaining more raw material from their sources. These latter mills usually reported that they did not rely much or at all on federal timber, but were able to obtain raw material from nearby private non-industrial or industrial lands during the course of sawlog harvest operations.

Nearly all manufacturers, manufacturer/treaters and treaters reported that they would have difficulty in selling all of their product output at maximum production levels. The reason given for this inability to sell all that they could make, given adequate supplies of raw material, was the invasion into the market of low-cost Canadian imports of white and treated posts. This same statement was made by treaters who were treating and selling these same Canadian posts. It appears that the supply of available treatable material should not be a problem, given the reported amount of small-diameter raw material available from north of the border. Another factor listed as a cause of market shrinkage

for domestic producers are the inroads into the market by competitive fencing materials, such as plastic and steel.

Purchase of both domestic and Canadian untreated roundwood for either immediate sale to the end user or for treatment and sale is examined in Chart 4. The leading states for purchase of white material for further manufacture are California, South Dakota, Idaho Colorado and Oregon. Again, these states lack a significant manufacturer/treater component and the treaters rely on outside sources for the material they treat.

Examination of the western United States treaters' utilization of untreated roundwood shows that, while a significant amount, Canadian untreated material accounts for only about 30% of the nearly 10,000,000 eight-foot equivalent units used in the region, far below the perceived percentage generally reported in the survey.

Value of Treated and Untreated Roundwood Products

The survey assembled data for the manufacture of both treated and untreated products in four small-end diameter classes, namely 2-2.9 inches, 3-4.9 inches, 5-6.9 inches and greater than 7 inches. These values, therefore, would be for operations that manufacture white posts and those that both manufacture and treat. Chart 5 summarizes the data, showing each size class's portion of both the treated and untreated markets.

In each state, the manufacture of material greater than 7 inches was quite limited, accounting for a small percentage of that state's total output. This material is often used for large gate posts that support long, heavy gates spanning large roadways. The use of cattle guards for this use is now common throughout the region, limiting the market for this material. Logs of this size are also in demand at newer sawmills that can economically utilize logs of this diameter class, thus the value as a sawlog often determines its utilization for lumber.

By far, the most valuable components of the region's roundwood production in 2000 were the two untreated, intermediate size classes. The relatively high production of untreated posts and rails in these size classes shows that most of this material is processed further by treating plants located close to the end users. The smaller amount volumes of treated roundwood come from the plants that both manufacture and treat, and command a noticeably smaller portion of the treated market.

In the mid 1990's, the 2-2.9" diameter class occupied a significantly larger portion of the roundwood market, with products such as treated and untreated tree props and small-scale post-and-rail fencing selling well throughout the region, especially Colorado and California. Several mills were built to provide these materials for the landscape industry, and provided an outlet for material that would have normally been left in the forest. More recently, with the slowdown in new housing construction in many areas and a switch to alternate materials such as steel, the market for these items has diminished.

One market segment, however, that grew during and following the contraction of tree props and small-diameter fencing, was log and rustic furniture stock. Requiring a higher

overall quality than landscaping uses, furniture applications are not likely to replace this segment, and require special sorting and processing. Species such as Douglas-fir, larch and lodgepole pine can be found in overstocked stands that suppress diameter growth, and display unusually straight stems of low taper. Easily peeled, these stems must be thoroughly dried prior to final utilization, as many are fashioned into components with mortise and tenon joints that are compromised by post-manufacture shrinkage. Nearly all of this size class is utilized in the untreated form.

Reports of flattening of the growth of this market came from several producers in the lodgepole pine regions, but manufacturers of Douglas-fir furniture product are cautiously optimistic about continued stable or increased future demand.

Economic Value and Employment at Current and Maximum Production Capacities

The economic impact, in terms of direct employment and wholesale product value of the roundwood industry was estimated as part of this characterization study. Charts 6 and 7 graphically depict the data related to employment and total production of untreated and treated products in 2000. All three categories of producers in the industry are represented, therefore estimating the total exchanged value of the products. Numbers of employees for the operations are listed, both for actual 2000 employment and for the estimated employment at maximum capacity. Product value and number of employees are statewide sums of the values reported by the individual companies. Regional total is the sum of all states.

Both current employment and production levels are substantially less than the estimated capacity of the industry. While a approximately half the manufacturers and manufacturer/treaters reported that they would not be able to obtain enough raw materials to operate at maximum capacity, the other half reported that they would be able to supply their operation running near or at full capacity. The treaters also stated that they believed that they could obtain the raw materials, in the form of untreated posts and rails, to run at their maximum capacity. Very few, however, stated that they would be able to sell all they could produce given enough raw materials. The perception that imports and replacement materials were taking away market share was universal. While Charts 6 and 7 show a total theoretical employment of 1500 and a gross product value of \$140,000,000 for the region, most companies interviewed doubted that they could sell all that they could produce due to the influence of less expensive treated imports and the substitution of steel and plastic for wood in the fence and commercial agricultural markets.

While the relative level of employment in the small roundwood industry is small when compared to the region's total wood products industry direct employment level, it is an especially vital segment of the industry in the areas that it serves. Fuel reduction through timber harvest is recognized as a vital tool for the forest manager, and small roundwood utilization is an economically sound means of mitigating long-term fuels buildup in many areas of the western United States.

Cost and availability were seen as the major differences between domestic and imported roundwood product cost in the market place. Providing more opportunities for small roundwood harvest on National Forest lands by individuals or small companies through post and pole sales designed for simple harvest and collection techniques could entice displaced workers back into the forest as providers of raw materials for the industry.

Trends and Implications

The small roundwood industry of the western United States has historically been located in that portion of the region where the two varieties of lodgepole pine suitable for these products are located. This thin-barked species typically grows in large, densely-stocked and nearly pure stands where small-diameter trees with little taper in the straight stems are easily harvested by hand power saw or feller-buncher. Lodgepole pine sapwood accepts treatment well, and, due to a small amount of taper in a typical stem, debarking or dowelling generally leaves nearly the entire sapwood region for treating.

Historically, post and pole cutters would purchase sales and be allowed to choose trees for felling, leaving behind the larger, healthier specimens, while removing the suppressed understory. These trees would be brought to the mill cut-to-length in small loads of 100 to 250 stems, and representative of a day's work for a single cutter. Recently, however, mechanization has been introduced to post cutting, and smaller diameter materials found on sawtimber sales are brought to the mill in tree length. The mill no longer is able to control the inflow of raw material diameters and must be able to market products in a wide range of diameters. Products, both treated and untreated, are needed in the full range of diameters in order to enable mills to market materials they must accept.

Another recent development is the inclusion of more Douglas-fir from sawlog operations. Normally a difficult species to treat, small diameter, suppressed Douglas-fir poses the additional problem of removal of much of the narrow band of sapwood when peeled or dowelled. New developments in the treatment of Douglas-fir may enable manufacturers to begin production of products for use in contact with the ground or above-ground uses in environments conducive to in-service decay. The use of more Douglas-fir and other species for post and pole material is increasing, but its utilization as a treated wood product will necessitate the use of more expensive treatment methods.

Employment has been decreasing in the harvesting and manufacturing segments of the industry for several years. In addition to the slow decrease in the number of cut-to-length providers, harvesting mechanization has caused the decrease of harvesting workers in the post and pole industry. Given current and expected production levels in the foreseeable future, this trend will likely continue at a slower pace, stop or slightly reverse, depending on market size, raw material availability and cost and import levels.

The trend toward increased utilization of small diameter roundwood as furniture components is slowing. Markets for roundwood of high quality appearance have softened over the last few years, and the increases seen in this use since 1990 have nearly disappeared. Never a large part of the furniture sales picture, log furniture suffers from

what many producers have reported as the fate of other products in the cyclic and fashion/consumer taste-driven home and outdoor furnishings market. Never a commodity item, use as furniture stock cannot be relied on for managing forest fuels loading the way post and pole production can.

Imports of Canadian treated and untreated products were reported to have increased significantly during the past 10 years. These imports have generally be less expensive for the consumer than domestically, even locally-produced products, and have become a significant force in the marketplace. Because of having to compete with lower-priced products, American producers have had to decrease production and transportation costs, while at the same time increase production rates per employee in order to more efficiently compete. Raw material costs for domestic producers have steadily increased during the last decade, resulting in a perceived inability to effectively compete. Longtime customers have remained loyal to producers of treated products, but new consumers, large agricultural buyers and installation contractors often buy with price as the primary criterion. In many regards, the manufacturer/treaters have built up a strong clientele of local buyers who often resist the lure of low price to continue the tradition of fair price and good treatment that results in a high value purchase.

Summary

The small roundwood industry of the western United States consists of many small producers of untreated and treated products used in many segments of the rural and agricultural portions of the western economy. Every state has at least one or more components of the industry, with those with or adjacent to areas with large stands of lodgepole pine the leaders in production. Products and processes favor the diameters from 3” to 7”, and CCA pressure treating is the principal treatment process. Employment has been decreasing over the past 10 years due to a combination of loss of market share to imports and substitute products, mechanization of small-diameter tree harvesting and a lack of small roundwood specific timber sales on Federal forestland.

Trends and outlook expressed by the industry include a decrease and leveling in the loss of market share, optimism regarding the increase in availability of small-diameter stems at lower costs than at present, and a continued struggle with the continued acceptance of CCA as a treatment method.

Leading states for manufacture and manufacture/treating of posts include Montana, Oregon, Wyoming and Colorado, while California, Colorado, Idaho and South Dakota are leaders in the treating industry. The three largest producer states, Montana, Oregon and Wyoming, together manufactured over 45,000,000 linear feet of the region’s 60,000,000 + ft. of treated and untreated posts. Total estimated value of regional industry sales was over \$40,000,000 in 2000, while estimated potential sales value at theoretical maximum production capacity is estimated to have been over \$140,000,000. Over 500 people are currently directly employed in the manufacturing and treating phases of the post industry of the western United States.

Major competition for the domestic producers as reported to be Canadian white and treated producers and their products as well as substitute fencing, signing and trellis materials, such as steel and vinyl.

APPENDIX II

SURVEY QUESTIONNAIRE

Western U.S. Roundwood Industry Characterization Study

Conducted In Cooperation with Intermountain Roundwood Association, Colorado State Forest Service, US Forest Service and the Montana Forest and Conservation Experiment Station

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COMPANY BACKGROUND

Company Name _____ Date of Contact _____

Contact's Name _____ Position _____ Phone (____) _____

Street, PO Box or RD# _____
City _____ State _____ Zip _____

Phone (____) _____ FAX (____) _____
Mobile (____) _____ email _____

Web Page Address _____
Owner's Name _____
How long have you been in business? _____ How Many Manf. Locations? _____

PRODUCTION AND LABOR

Breakdown of 2-7" Roundwood Products and Services; give estimated range of percentage of gross sales:

Do you have treating facilities? _____. Type _____. Assayed? _____

Service treating only _____ - _____ % Manufacture and Treat _____ - _____ %;

Manufacture, untreated _____ - _____ % Buy White and Treat _____ - _____ %
Broker Only _____ - _____ % Wholesale Only _____ - _____ %

Number of Shifts/week Currently _____ @Max. Capacity.

Number of employees/shift Currently _____ @Max. Capacity.

Estimated Number of 2-7" Roundwood Pieces Manufactured / yr. (8-foot equivalent)

Treated: Currently _____ pcs/yr, _____ % total production of facility

@ Max. Capacity _____ pcs/yr, _____ % total production of facility

Untreated: Currently _____, _____ % @ Max. Cpcty. _____, _____ % total production of facility

Gross Sales/yr. (include all products including roundwood) \$ _____ ; broken down as....

1. Products (Lumber, Poles, posts, rails, props etc.) (% gross) _____ - _____ %
2. Service Treating all products (% gross) _____ - _____ %

What percentage of the above-listed Company gross sales are 2-7" roundwood (posts, tree props and rails)? _____ %

What trends do you see in production and labor?

RAW MATERIALS

How Posts are Purchased

What % mix is your raw material: Federal _____ - _____ State _____ - _____ Tribe _____ - _____

Industrial _____ - _____ Private non-Industrial _____ - _____ Canada _____ - _____

How do you obtain your raw material for posts?

Does your company own timberland that it harvests for posts? _____.

What % of your company's total post production comes from this land?
_____.

Do you sell posts harvested from this land to other manufacturers? _____.

Do you purchase timber sales? _____

If you do purchase timber sales, what % of your raw material comes from purchased sales? _____.

If you do purchase timber sales, do company crews do the harvesting? _____

Do you purchase material from other processors? Approximate % of total _____ - _____ %

Do you purchase material from brokers? _____ - _____ %

Do you purchase material from independent contractors at the gate? _____ - _____
_____ % of production

Do You Utilize...

Whole trees? _____ - _____ % of 2-7" roundwood production

Cut-to-length posts, delivered bark on? _____ - _____ % of 2-7" roundwood production

Cut-to-length posts, delivered bark off? _____ - _____ % of 2-7" roundwood production

What trends do you see in raw materials?

Species Used

1. Spp. #1 _____ = _____ - _____ % of 2-7" roundwood production:

Source ¹: _____, _____ - _____ % of spp.; _____, _____ - _____ % of spp.; _____, _____ - _____ % of spp.

2. Spp. #2 _____ = _____ - _____ % of 2-7" roundwood production

¹ Use state or province abbreviation and list % of total for that species

Source: _____, _____ - _____ % of spp.; _____, _____ - _____ % of spp.; _____, _____ - _____ % of spp.

3. Spp.#3 _____ = _____ - _____ % of 2-7" roundwood production

Source: _____, _____ - _____ % of spp.; _____, _____ - _____ % of spp.; _____, _____ - _____ % of spp.

4. 4. Spp. #2 _____ = _____ - _____ % of Total: of 2-7" roundwood production

Source: _____, _____ - _____ % of spp.; _____, _____ - _____ % of spp.; _____, _____ - _____ % of spp.

5. 5. Spp. #2 _____ = _____ - _____ % of 2-7" roundwood production

Source: _____, _____ - _____ % of spp.; _____, _____ - _____ % of spp.; _____, _____ - _____ % of spp.

MANUFACTURING AND PRODUCTS

What approximate percentage of 2-7" roundwood production is treated at your facility?
_____ %.

What approximate percentage of roundwood production is

2.0"-2.9" _____ - _____ %, 3.0"-4.9" _____ - _____ %, 5.0" -6.9" _____ - _____ % 7.)"+
_____ %

How do you produce your posts (Morbark, doweler, sizes, etc)?

Do you do anything else to add value to posts (point ends, chamfer top, dowel, drill, split rails etc.)?

What trends do you see in manufacturing and products?

MARKET AND END USE

To whom are you selling? (Include state or geographic location of buyers)

Who are the end users and what are they using the roundwood for? (Please give details if answer is “AG industry” eg. grape trellises, berry trellises, highway RoW posts, etc.)

Do you foresee any expansions or changes in the manufacturing or product mix?

What trends do you see in markets and end uses?

How do you obtain news about your industry?

Organizations you belong to: (WWPI, Intermountain Roundwood, AWPA etc.)
Is there anything that you think would be relevant for us to not addressed?

IMPORTANT SUMMARY QUESTIONS:

1. Could you get enough raw materials to run a maximum capacity?
2. Could you sell it if you could make it?

If you could not sell it, what is responsible for not being able to sell it all?

Do you see an influence on the supply or market demand by Canadian or Southern Pine imports?

Please list the name and phone number of other roundwood manufacturers in your state that can participate in this survey.

_____ (____) _____

_____ (____) _____

_____ (____) _____

Would you like to be put on the list to receive a copy of the final report? _____

THANK YOU
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