

Small Log and Biomass Conversion Panel

Lower Capital Investment Options
Post/Pole and Animal Bedding
Business Models

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Post/Pole General Product Categories



- Commodity (e.g. fencing and agriculture)
- Specialty Products (e.g. house logs to roundwood furniture stock)
- Manufacturing Residuals

Post/Pole Western U.S. Market

- Western U.S. market for treated and untreated post/pole products at least \$83 million (not including treated Canadian imports) (2001)
- Around 60 million linear feet post/pole products provided by Western U.S. manufacturers (2001)

Post/Pole Market Segments



- Fencing
- Agriculture
- Highway
- Utility Poles
- Roundwood Furniture
- Structural and Architectural Accents

Post/Pole Product Line Considerations



- Consistency
(supplier and product quality)
- Pricing
- Species
- Peeled vs Doweled
- Local Markets

Post/Pole Raw Material Sourcing



- About evenly split in 2001 between non-industrial prvt, Canadian and Federal, and 10% other, but things have changed.
- Prices paid for LPP and PP \$28-\$40/ton.

Post/Pole Sales and Distribution

- Wholesaler Model Predominates – Purchases production and ships to treating plants, and sometimes provides operating capital.
- Direct Sales – Some well-established businesses sell direct and some also treat.
- Critical Market Issue – Manufacturing residuals.

Post/Pole Machinery and Production



- Western U.S. 2001 production primarily from MT, OR and WY (about 75%).
- Peelers and Dowelers – 1,200 pieces/day
- Manufacturer/Treaters – Not common, but exists, especially in MT and SD.

Post/Pole Capital Investment



- Assuming 300,000 pieces/yr
- Investment = \$750,000 - \$1.5 million
- 5-6 employees/shift
- 2 Turning Machines
- Log merchandizing equipment is key

Post/Pole Trends and Competition

- Decrease in Canadian Competition
- Fewer Post/Pole Plants
- Industry Remains Small
- Underutilized Manufacturing Capacity
- CCA Re-Registration
- Prices Have Risen for Products

Post/Pole

Trends and Competition

- Increased Acceptance of Ponderosa Pine
- Increased Imports of Radiata
- Wood Pole Substitutes Became Higher Cost
- New Markets for Durable Species
- Alternative to Treating Posts for Ground Contact
- Utility Small Pole Market (16'-25')

Post/Pole Business Model

More Information

- Intermountain Roundwood Association (www.intermountainroundwood.org) (2008 annual meeting March 7th, Missoula, MT)
- Not the same as North American Wood Pole Council (utility pole focus, www.woodpoles.org)

Animal Bedding Product Examples



- Traditional use is absorbent to help collect and remove manure and urine.
- Wood shavings, wood pellets, straw, shredded newspaper, composite pellets and corn cob pellets.

Animal Bedding Markets



- Large Animal (e.g. horses, dairy and feedlots)
- Small Animal (typically caged)
- Poultry
- Lab Animals
- Others



Animal Bedding Product Considerations



- Pricing
- Species (e.g. aromatic cedar, pine, aspen etc.)
- Particle Size and Fines
- Moisture Content
- Potential Contaminants



Animal Bedding Product Distribution



- Variety of Arrangements
- Sales Rep or Sales Agent
- Direct, In-House Sales and Marketing
- Less Frequent, Broker or Wholesaler Arrangement

Animal Bedding Raw Material and Machinery



- Shavings From Sawmill and Other Wood Manufacturers
- Whole Log Shavers



Sawmill Shavings Investment Scenario



- Not including land, power and water....
- Assume bldg, sprinklers, truck dump, rotary drum dryer, screens, conveyors, bagger and pallet stretch wrapper
- \$700,000 (does not include covered storage and working capital)

Wholelog Shavings Mill Investment Scenario



- Assume similar items as previous investment scenario, but add....
- More Land
- Rolling Stock
- Log Infeed and Debarker
- Cut-Off Saw System
- Log Shaver (min 1,000 cu ft/hr, about 2.5 tons/hr)
- \$780,000 - \$840,000 (does not include land etc., covered storage and operating capital)

Animal Bedding Trends and Competition



- Sales Integrated With Waste Disposal
- Pellet Penetration
- Canadian Dollar and NAFTA
- Recycled Commodity Prices
- Manufacturing Residuals Supply
- Shavings/Pellets Manufacturing at Same Location