GROWING PROFITABILITY
FIREWOOD OPERATIONS -
“YOU ARE SUPPOSED TO MAKE MONEY
IN THE FIREWOOD BUSINESS OFF
EVERY STICK OF FIREWOOD!”

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Harry Watt
North Carolina State University
and
US Forest Service’s
Wood Education and Resource Center

http://outreach.cnr.ncsu.edu/ncwood
North Carolina State University
Wood Products Extension

Since 1950 has supported the wood products industry in North Carolina in the areas of wood education, training, troubleshooting problems, research and overall assistance in making a large variety of wood products.

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NCSU/WPE Website = http://outreach.cnr.ncsu.edu/ncwood
Wood Education and Resource Center

- Is the focus of the US Forest Service effort of support of the hardwood forest industry in the states east of the Great Plains

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Understanding Forestry and Wood Products Businesses - general rules

• High degree of completion
• High focus on price
• Realize that almost no forest and wood products companies can survive on one product and one customer base over the long term - have to adapt over time
• Understand that every business is unique!
Understanding Forestry and Wood Products Businesses

• Should be able to sell every piece of firewood
• Must “optimize” each piece of wood to be successful—want to maximize total profitability
• Follow example of lumber producers that grade each board and sell to the highest bidder

A sixty bay lumber board sorter insures that the lumber company optimizes each board to the higher paying customer = automation + highest revenue
Optimization for Firewood

- Look at each piece and immediately sort in a flow production system-diagram flows and eliminate waits, delays and double-handling
- Different grades have different value based on customer needs and prices paid, urban folks pay more
- Want to manage labor costs and number of dealings—goes into piles, baskets, bags, skids, bundles, etc.
Grading Firewood Products-key to matching firewood products to customer needs-charge more for “pretty wood”

- Grading system from top quality to bottom
  - Top = “Pretty firewood” = Grade 1, all splits
  - Medium = Fair quality = Grade 2
  - Low = Economy = knotty, crooked, etc. = Grade 3, limbs
Marketing Metro Regions-different from rural areas

• Metro regions offer “low cost” “urban logs” that can come from arborists and lot clearing companies-(low cost does have cost!)

• Metro regions offer high number of firewood buyers with higher incomes locally for small volumes

• Metro regions offer more markets-restaurant, “pretty wood” buyers, outdoor fireplaces and firepits, but not so many outdoor furnaces

• Most regions of the US have a metro region within a reasonable delivery distance-rural producers don’t have to only sell in rural areas!
Marketing Rural Regions

- Green split wood to volume users
- Preselling firewood-schedule delivery directly and collect
- Selling green off dump trucks and trailers-don’t stack
- Sell to volume buyers-campgrounds, resorts, etc.
- May sell to a processor that can kiln dry and bundle
- Think-”who can appreciate what I bring to the market?”
- Can charge more for long wood
- Think of out of the area buyers-firewood has both regional and national markets
Domestic Space Heating and Hot Water Loads = a market so large that the US firewood industry cannot meet the demand

- Average US households has 2.4 persons
- Typical US household spends $1,500 per year on space heating and domestic hot water
- Wood from firewood producers could reduce the fuel cost by 2/3rds for families with outdoor furnaces
- Problem = how to repay initial costs on fuel savings
- Homeowners cannot justify long payouts for new wood fired heating systems
Example of Success - Ernie the Woodman, Huntersville, North Carolina

- Prime location - on a major NC highway between two towns in the highest population county in North Carolina = Mecklenburg - local sales only
- Acquires free logs from arborists and lot clearing contractors - avoiding dump fees
- Three manual splitters with a single operator, conveyor that makes big piles
- Sells all the split yellow pine he can make - outdoor burning
- Sells all the split hardwood he can make - stoves and fireplaces
- His advertising is a large pile of firewood along a busy road
- Working on a Sawmill Magazine article

Ernie does not touch the firewood after splitting until loading onto dump trucks, dump trailers or customer vehicles
Preselling to Earn $ in Off Season

- Story of pallet company in Arkansas preselling 480 dump truck loads of short cant oak firewood blocks per year
- Calculate your annual production, pre-sale and payment at delivery
- Works for sales of green and kiln dried split wood, bundles, kindling, restaurant firewood, etc.
Bundles of Kiln Dried Firewood

- Not the only option available but a good choice for many
- Want to figure out how to produce year around
- Relatively small number of national volume buyers
- Lots of smaller regional and local stores
- Lots of buyer categories-big box, grocery stores, convenience stores, etc.
- Need dry kiln and packing equipment or access
- Need storage facilities to make a year around operation and a customer base that may buy in the off season
- Have to be able to finance inventory or sell at a discount in summer months due to seasonal sales
1980 Firewood Manufacturing and Marketing USFS *Publication-a look into our past*

- Handout has pages of tables, see all the publication at [www.cnr.ncsu.edu/fb/extension/ncwood](http://www.cnr.ncsu.edu/fb/extension/ncwood), then the 2015 firewood workshop
- Discusses the processing of 750 low grade logs into firewood by three operations
- Uses work studies to generate operational statistics
- Figures are out of date but the concepts apply today
Page 3-Photo of a Dual Operator Processor-Vintage 1980
Basics-Air Drying Hardwood Firewood

- Many processors and sellers confused on what is seasoned firewood versus green
- Sapwood species dry faster
- Covering wood from rain helps drying
- Strong air flow helps drying
- Fastest moisture loss in first month
- Spring cut firewood will catch up to earlier cut fall firewood by selling time in a good drying system
- Split firewood dries to a lower moisture content than round firewood of the same size
- Split wood categories = green, seasoned, kiln dried
Good Ideas

1. Presale your firewood
2. Develop year around markets
3. Seek out who pays top dollar
4. Find low cost logs
5. Create a steady flow operation
6. Share overhead expenses with other businesses
7. Markets are different-green, seasoned, kiln dried
8. Sell all you produce with a good profit margin
Conclusion

- Apply good management to a firewood operation
- Work out a good business strategy on paper first
- Understand your supply of logs and buyers
- Work to find the highest profit margin for each stick
- Think of multiple products and multiple buyer categories
- Pre sell to get sales $ year around
- Location does matter in the local market-be visible
- Match equipment to business sales volume
- Develop a good crew that has incentives for top performances