



TONS VS. CORDS TO BIOFUELS

Market Discussion

Origin of how weights/cords developed

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September 10, 2008

History of Cord

- A cord is 4 by 4 by 8 feet
- Where did the term come from????





History of Cord

- The Cord dates back to England after the Roman conquest.
- The Roman chariot width was determined by the width of the two horses pulling it or 4.5 feet. The width is known due to the ruts created by the wheels of Roman chariots still visible in England today.
- Horse-drawn carts were made the same width to follow in chariot ruts on main Roman highways. The cart's standard 8-foot length was determined by the amount of wood weight two horses could pull.



History of Cord

- The wood was piled on to the carts and tied with a standard length of cord for market so the peasant did not have to do any calculations.
- So the source of the cord comes from the width of ruts created by Roman Chariots, which in turn, determined the width of English carts and the size of the cord.

History of Cord

So, in effect, the cord was determine by the spacing of two horses' behinds.



History of Cord

■ Actually:

I was unable to find anything on the history of how the term cord came to be. Other than it relates to the cord used to tie it.





Weight Scaling

- It started in 70's in the Pacific Northwest and earlier in the south.
- A sample of the trucks coming in are scaled to whatever method: cord of BF.
- Lends itself to small diameter, low value material.
- In the Intermountain area in the Northwest the mills think in green tons.



Weight Scaling

- The mills track lumber recovery to green tons of logs.
- This must be tracked, as log size and MC have a significant impact on how much raw material you get per ton.



Weight Scaling

- Example calculation of an Aspen cord
- Specific Gravity .38
- MC Green basis 52%
- MC Dry basis 108%
- Source for Pieces per cord , Forest Mensuration by Chapmen
- Source for Cubic feet, Peter Koch
- Weight per cord was calculated using a program developed by Bob Govett.

Weight Scaling



Diameter	Pieces per cord	Cubic feet	Green Weight
4	110	78	3997
5	74	80	4099
6	53	82	4202
7	40	85	4356
8	30	88	4509
9	24	90	4612
10	20	91	4663
11	18	92	4714
12	15	93	4766

Weight Scaling

- Works really well when you are not converting to another measure.
- Inexpensive for the mill and easily documented.



Weight Scaling

- Firm must track yields and adjust prices accordingly.
- If your thought process is tons per board foot or tons per ton of pulp, life is good.



Weight Scaling

- Converting from tons to cords or bf then things get interesting.
- Requires monitoring and adjustment due to MC, log size and species.



Take some examples

- Wood actually weighs more than weight in the Handbook???
- Timber is greater diameter than the handbook weight???
- Timber is smaller in diameter than the what the handbook weights based on???



Changing Markets

- There will be more demand for small material and residues.
- Possible increase of biomass 1 million dry tons.
- Pellet plants will need cheap, low quality material.



Changing Markets

- The interest in logging residue and low quality material is just starting to take off.
- By the ton seems to be the method that makes the most sense for this material.
- We need to adapt and start thinking in tons.



Changing Markets

- We need to work toward a system that does not require converting back and forth from tons to cords or boards.

Questions



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