

Cubic Log Scaling: *what has become of the thirty plus year, multi-million dollar investment by the USFS and BLM on study and implementation?*

Starting early in the 1900s, it was known by those knowledgeable of forest/wood products mensuration and product recovery, that the board foot rules were not very accurate at predicting fiber content, nor were they accurate at predicting product yield. This fact should come as no surprise; Excepting the US and a tiny sector of Canada, there are no countries in the world that use log rules (such as the board foot). And even Canada, which once exclusively measured logs in board feet, long ago switched to cubic measure for the vast majority of its forest sector.

As a result of the above, an organized group of US measurements specialists from various agencies (USFS, BLM, BIA), third party scaling bureaus and representatives from private industry formed a committee (in the early 1970s) to study whether a switch to cubic measure was an improvement over the board foot rules, and if so, how should this cubic rule look procedurally and be implemented. The cubic rules committee (led by the USFS) met for many years during the period from the 1970s until 2002 and had good participation from the industry (certainly most were aware of this group and invited to participate). In 1991 the Handbook for cubic log rules was published after many millions of dollars spent by the Forest Service, industry, scaling bureaus and other agencies on log recovery studies, meetings, feasibility studies, software development, etc.

Many on the industry-side were not exactly willing participants; the chief of the Forest Service had written numerous memorandums mandating this change. Given that most players from industry (especially in the west) purchase federal timber, and that historically the USFS has set the standards for all timber transactions, even private, (via the USFS Log Scaling Handbook); most felt obligated to participate in the formulation of this new set of standards for measuring logs.

In 2004 the process of switching to cubic took two very large steps backward; firstly there was an unconnected proposal to The National Conference on Weights & Measures (NCWM) - that cubic measure become the standardized measure of roundwood in the US. The proposal was made to address the often confusing, misunderstood, inconsistently applied, and non-correlated board foot scales. This proposal was withdrawn after protests by some timber purchasers, however, the National Woodland Owners Association (NWOA), which is the largest association of private timber owners in the US, supported the proposal (click on the following URL to view their position statement <http://www.woodlandowners.org/logscale.htm>). The following link is the press release from the AFPA regarding this measure:

<http://www.woodlandowners.org/NCWM%20Scaling%20Memo%20to%20Committees.htm>).

Further information on this issue can be found in the report of the 89th National Conference on Weights and Measures, July 11-15, 2004, which can be viewed via the following URL (see page 45-54, <http://ts.nist.gov/ts/htdocs/230/235/SP1028-04/PDF/LR-04-AnnualFinal.pdf>).

The second and most significant setback occurred when USFS regions 5, 6 and 10, as well as the BLM retracted their decision to sell timber sales on cubic and went back to the Scribner log rule. It should be said that many timber purchasers and some agency personnel (in most cases, those who chose not to participate in Cubic Committee meetings) did not understand cubic – and thus did not want it.

Despite years of effort and expense to develop the National Forest Cubic Scaling Handbook, which would have proved to be an improvement for everyone in the timber sector, cubic was

derailed rather quickly based on misinformation, and a lack of leadership. Take for example the following quote (from Instruction Memorandum No. 2004-154, Rescinding Cubic Log Measurement) by Thomas H. Dyer, Acting Assistant Director, Renewable Resources and Planning, BLM, Washington DC:

“Cubic measure is accepted as a more accurate measure of wood fiber volume; however, it does not accurately predict board foot recovery. Sawtimber (logs which are milled into boards, plywood, etc.) is the primary product from a majority of BLM timber sales. Mill studies and personnel expertise supports the concept that Scribner is more accurate than Cubic as a measure of board foot recovery” (<http://www.blm.gov/nhp/efoia/mt/2004/im/04mtm055.pdf>).

It is hard to know where Mr. Dyer obtained such erroneous information. In fact, it is well known by all knowledgeable in the field of timber measurement that “mill studies and experts” do not support such concepts. On the contrary, all of the studies and experts, both within the government and outside, have found that cubic is much better at predicting product recovery (this issue is not even disputable and the differences are not even close). Contrary to other statements that Mr. Dyer makes in the memo regarding scaler productivity dropping by a factor of 1.5 to 2, industry scalers are able to scale cubic and Scribner simultaneously without losing any productivity.

All the above is not to suggest that the cubic committee or mensurationists support government-controlled-standards mandating cubic. Many felt, however, that cubic would eventually sell itself to all users, and that by implementing cubic measure for federal timber, the USFS and BLM were in a unique position to “show the way and set the standard”. In the end, this opportunity was apparently lost and it appears that many of us were led into an expensive and somewhat fruitless effort.

That is not to say it was an entire waste; even without the USFS or BLM, many of the most progressive consumers of roundwood in the US are using cubic for internal accounting of inventory, values, and recovery. Most use Scribner or weight (which is often more accurate than Scribner for predicting product recovery) only to buy logs, but use cubic for log inventory management and predicting/rating product recovery. In addition, USFS Region 2 (southern, Rocky Mountains, Black Hills) is using cubic as are some of the bigger timber purchasers in the region, with both sides are very happy with cubic.

Looking ahead, it could be argued that it would not be advisable for industry to consider depending on the USFS or BLM to take the charge of setting the standard for cubic measure. Perhaps it would be better to look to another entity, such as the Northwest Log Advisory Group, the AFPA, the Timber Measurements Society, or another competent industry organization. And finally, even if you fall into the “against cubic” camp, it is incomprehensible that any government agency could spend so much time and money (including private industries’) on such an undertaking, and just quit.

Anyone wanting to comment on this article is welcome to do so (to submit a comment, email: roundwood@SAFe-mail.net). Serious comments will be posted.

The next article in this series “The Case for Cubic Log Scale” will present the information showing why cubic is a huge improvement over the board foot methods and showing why there is so much confusion regarding board foot measure.