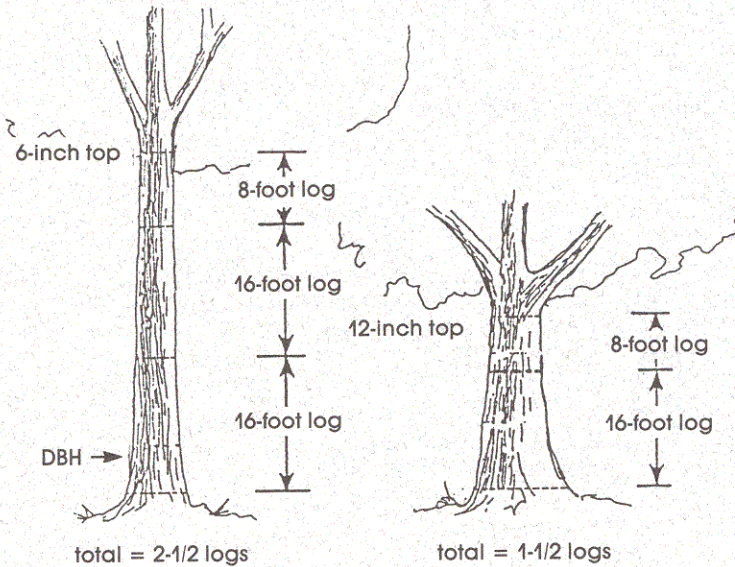




ESTIMATING TREE VOLUMES AND WHEN TO SELL TIMBER

BOARD FEET

Landowners interested in selling their trees for lumber will need to measure the board-foot content. They require measurements of DBH (diameter at breast height) and estimates of the number of 16-foot logs contained in the tree trunk. Logs are estimated to about six-inch top or where the usable length stops due to forking. The diagram below shows how to identify log lengths. Volume can then be estimated using the table.



for about \$70 per thousand board feet (MBF), a 12-inch tree is worth \$4.90. This indicates a six-fold increase in value ($4.90/.84 = 5.8$) when moving from pulpwood to sawtimber size. (With a 10 percent discount rate, the value still more than doubles). The lesson to be learned is clear – if your trees are approaching sawtimber size, don't cut them for a low-value product such as pulpwood unless the stand needs to be thinned. There are other changes in value as trees grow from sawtimber to veneer quality, but these increases in value are not nearly as dramatic as the pulpwood to sawtimber change. As a general rule, there is little real economic gain to the landowner by letting trees grow beyond 10 to 20 inches DBH. This is because the increase in value due to growth is low compared to the present value these large trees represent. In other words, you are earning a very low rate of interest on your investment.

GROSS VOLUME OF TREE IN BOARD FEET

Dbh	Merchantable height in number of 16-foot logs										
	1	1½	2	2½	3	3½	4	4½	5	5½	6
In.	Board feet										
10	36	48	59	66	73	-	-	-	-	-	-
11	46	61	76	86	96	-	-	-	-	-	-
12	56	74	92	106	120	128	137	-	-	-	-
13	67	90	112	130	147	158	168	-	-	-	-
14	78	105	132	153	174	187	200	-	-	-	-
15	92	124	156	182	208	225	242	-	-	-	-
16	106	143	180	210	241	263	285	-	-	-	-
17	121	164	206	242	278	304	330	-	-	-	-
18	136	184	233	274	314	344	374	-	-	-	-
19	154	209	264	311	358	392	427	-	-	-	-
20	171	234	296	348	401	440	480	511	542	-	-
21	191	262	332	391	450	496	542	579	616	-	-
22	211	290	368	434	500	552	603	647	691	-	-
23	231	318	404	478	552	608	663	714	766	-	-
24	251	346	441	523	605	664	723	782	840	-	-
25	275	380	484	574	665	732	800	865	930	-	-
26	299	414	528	626	725	801	877	949	1021	-	-
27	323	448	572	680	788	870	952	1032	1111	-	-
28	347	482	616	723	850	938	1027	1114	1201	1280	1358
29	375	521	667	794	920	1016	1112	1210	1308	1398	1488
30	403	560	718	854	991	1094	1198	1306	1415	1517	1619
31	432	602	772	921	1070	1184	1299	1412	1526	1640	1754
32	462	644	826	988	1149	1274	1400	1518	1637	1762	1888
33	492	686	880	1053	1226	1360	1495	1622	1750	1888	2026
34	521	728	934	1119	1304	1447	1590	1727	1864	2014	2163
35	555	776	998	1196	1394	1548	1702	1851	2000	2156	2312
36	589	826	1063	1274	1485	1650	1814	1974	2135	2298	2461
37	622	873	1124	1351	1578	1752	1926	2099	2272	2444	2616
38	656	921	1186	1428	1670	1854	2038	2224	2410	2590	2771
39	694	976	1258	1514	1769	1968	2166	2359	2552	2744	2937
40	731	1030	1329	1598	1868	2081	2294	2494	2693	2898	3103

International 1/4-inch rule, Form Class 78

WHEN TO SELL TIMBER

Landowners often lose thousands of dollars by cutting their timber a few years too soon. In fact, fortunes have been made by land and timber buyers who recognized the great increase in value timber makes when it moves from pulpwood to sawtimber sizes. As an example, consider a pulpwood size hardwood tree 10 inches in diameter and 70 feet tall. We can estimate its volume as $(.5) (.005454) (10^2) (70) = 19$ cubic feet, = 0.21 cords. In many areas, stumpage for a cord of wood is \$4.00 per cord. This tree is worth $(\$0.21) (\$4.00) = \$0.84$ for pulpwood. (Figures used are examples only and may not represent present market values).

Trees often move from the 10-inch class to the 12-inch class in about 10 years. The 12-inch class is the minimum size accepted for sawtimber in many sections of the country. The number of board feet in 12-inch trees depends on the number of 16-foot logs they contain, of course, but they can be expected to have about 70 board feet. If stumpage sells