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2001 Indiana Forest Products Price Report and Trend Analysis

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2001 INDIANA FOREST PRODUCTS PRICE REPORT AND TREND ANALYSIS

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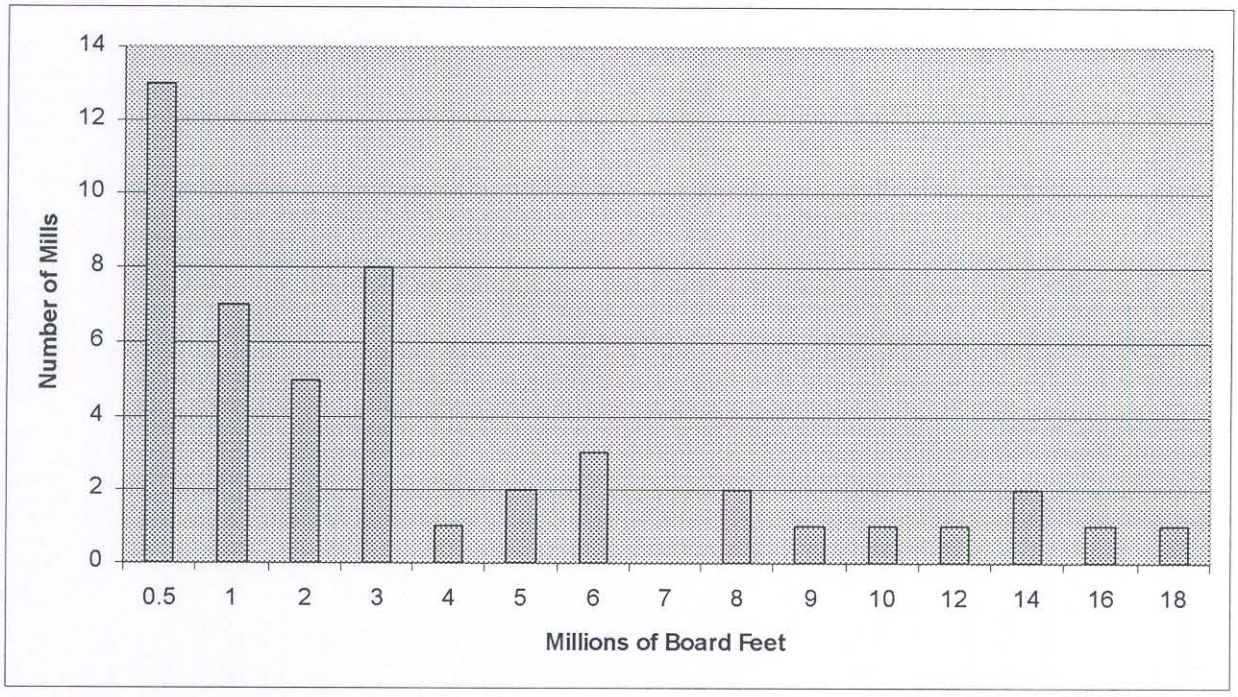
SURVEY PROCEDURES AND RESPONSE

Data for this survey was obtained by a mail survey of all known mills in Indiana who buy logs. The prices reported are for logs fob the log yards of the reporting mills. Approximate stumpage prices can be obtained by subtracting logging and hauling costs, Table 4, from the delivered sawlog and veneer log prices.

Seventy-eight mills reported some useable data, compared to 68 in 2000. The number of mills contributing price data for a specific product is shown in the product entries in Tables 1 and 2. Forty-eight mills reported their 2000 total board foot production. The distribution by production categories is shown in Figure 1. The total production for these mills was 179.million board feet. The smallest mill, a custom mill, reported production of 150 MBF. The largest mill produced 18 million board feet in 2000.

Figure 1. Mills reporting 2000 total production level, 48 mills total reporting.



For the last 16 years at least the Indiana Forest Products Price Survey has been mailed out and responses returned to the Indiana Agricultural Statistics Service (IASS). This year for the third time IASS enumerators were used to contact mills not responding to the mail solicitation.

CAUTION

This report is intended to be used as an indication of price trends, not for the market appraisal of logs or stumpage. This data is collected only once a year and log prices are constantly changing. Proper appraisal techniques by those familiar with market conditions on a day-by-day basis should be used to obtain estimates of current market values.

SAWLOG PRICES

The hardwood lumber industry has felt the affects of the economic slowdown. Most hardwood lumber prices are down significantly from year-ago levels, Table 1. Ash for example is down over 18 percent from July 2000 for the highest grade. The exceptions are black walnut and black cherry. The strength of black walnut results primarily from the long awaited adjustment in inventories and some pick-up in demand. Black cherry is running on continued strong demand, although the price of lower grades is starting to slip. But, these two species account for only a small portion of the total market. Their strength isn't enough to counter declines in the hign volume species.

Sawlog prices reflect the decline in lumber prices. Prices for all species except sycamore, black walnut, and black cherry were down overall, Table 2. However, the reported prices for black walnut and black cherry were variable enough to result in a statistical decline in the average price for some log grades. The declines were in the 5 to 10 percent range, depending on species. Further softening of prices is likely given the economic impact of terrorist activities.

VENEER LOG PRICES

The decline in veneer log prices was greater than for sawlogs, Table 3. Declines were typically over 10 percent or more. The only species increasing was white oak for prime grade logs in the smaller size classes.

The strong dollar has reduced export sales of veneer and veneer logs to traditional customers. The veneer industry is also adjusting to a shift in furniture manufacturing to China where inexpensive labor is attractive to manufacturers. Product is still moving to the higher quality domestic furniture manufacturers, but declines in new housing starts has reduced overall demand.

IMPLICATIONS

I suppose this is the fourth or fifth downturn I've discussed in the context of timber product prices and the implications for landowners who may be considering selling timber. I'm not nieve enough to think my comments in this report will affect the decisions of many landowners, but I do take seriously the need to help landowners capture maximimum value for their timber while maintaining a strong lumber and veneer industry in Indiana.

In every downturn there is a shakeout in the industry . The smaller, less efficient, and under capitalized mills cease production for a while, or permanently. Larger mills with well established relationships with their customer base will fare much better and be the major buyers of stumpage and logs. Thus, there is no reason for a landowners to assume that there is no market for their timber. As always the highest demand will be for higher quality timber, especially walnut and cherry. The only way to find out what the market is for your timber is to talk with buyers. The price you get will be determined by how quickly you need to sell and how badly a given mill needs logs. Depend on the bidding and/or negotiation process to get you the best offer possible. Unless you absolutely have to sell now, the trees will still be there when the market improves to a level you are more comfortable with.

Table 1. Hardwood Lumber prices, 4/4 Appalachian unless otherwise indicated (Hardwood Market Report, Memphis, Tenn.), $ per MBF.

	Lumber Grade	Jan 1998	July 1998	Jan 1999	July 1999	Jan 2000	July 2000	Jan 2001	July 2001	Sep. 2001
Ash										
	FAS + Prem.	800	745	735	735	815	945	945	825	770
	No. 1C	560	560	560	560	590	650	650	570	520
	No. 2A	310	310	310	310	325	365	355	315	290
Basswood										
	FAS + Prem.	735	710	710	710	765	810	810	740	655
	No. 1C	360	360	360	360	385	405	405	390	370
	No. 2A	225	225	225	225	225	230	225	210	210
Beech										
	FAS	465	465	465	465	465	465	465	465	465
	No. 1C	415	415	415	415	405	405	405	405	405
	No. 2A	335	335	335	335	330	330	330	330	330
Cottonwood (Southern)										
	FAS	600	600	600	600	600	600	600	600	600
	No. 1C	400	400	400	400	400	400	400	400	400
	No. 2A	220	220	220	220	220	220	220	220	220
Cherry										
	FAS + Prem.	1940	2010	2025	2040	2115	2220	2375	2375	2375
	No. 1C	895	1065	1120	1135	1135	1135	1115	1075	1060
	No. 2A	475	625	675	690	690	680	575	470	450
Elm (Southern)										
	FAS	355	355	355	355	355	355	355	355	355
	No. 1C	335	335	335	335	335	335	335	335	335
	No. 2B	270	270	270	270	270	270	270	270	270
Hickory	FAS + Prem.	755	755	785	880	880	845	810	645	620
	No. 1C	510	510	540	620	620	595	575	500	485
	No. 2A	300	300	320	385	385	360	340	285	285
Hard Maple										
	FAS + Prem.	1370	1230	1235	1310	1410	1540	1565	1470	1470
	No. 1C	835	845	845	845	875	955	965	965	965
	NO. 2A	560	550	490	435	435	465	500	490	490
Soft Maple										
	FAS + Prem.	975	915	845	835	895	1045	1045	1005	990
	No. 1C	650	650	625	590	610	680	670	625	580
	No. 2A	400	400	380	325	325	350	340	300	295

Table 1. Hardwood Lumber prices, 4/4 Appalachian unless otherwise indicated (Hardwood Market Report, Memphis, Tenn.), $ per MBF, cont.

White Oak - Plain		Jan 1998	July 1998	Jan 1999	July 1999	Jan 2000	July 2000	Jan 2001	July 2001	Sep. 2001
	FAS + Prem.	990	955	920	925	935	935	945	875	860
	No. 1C	595	570	535	530	535	535	525	495	480
	No. 2A	435	380	330	370	370	370	370	350	350
Red Oak-Plain										
	FAS + Prem.	1115	1115	1115	1195	1210	1210	1220	1120	1110
	No. 1C	775	775	775	780	780	780	780	730	720
	No. 2A	560	505	455	485	485	485	495	480	480
Yellow Poplar										
	FAS + Prem.	680	650	670	815	890	820	790	630	620
	No. 1C	410	390	380	410	460	460	460	390	380
	No. 2A	295	295	285	285	300	300	300	280	275
Sycamore (Southern, Plain)										
	FAS	455	455	455	455	455	455	455	455	455
	No. 1C	435	435	435	435	435	435	435	435	435
	No. 2A	375	375	375	375	375	375	375	375	375
Black Walnut										
	FAS	1410	1410	1410	1410	1410	1440	1470	1565	1580
	No. 1C	775	775	775	775	775	785	785	785	795
	No. 2A	290	290	290	290	290	295	325	380	390

Table 2. Prices paid for delivered sawlogs by Indiana sawmills, May 2000 and May 2001.

Species/Grade	2001 Range	No. Respon. 2001	No. Respon. 2000	Mean (s.e.)1 2001	Mean (s.e.)1 2000	Median 2001	Median 2000	Change (%) Mean	Change (%) Median
White Ash	($/MBF)			($/MBF)			($MBF)		
Prime	300-700	33	38	483	564	450	585	-14.4	-23.1
				(17.85)	(17.55)				
No. 1	200-600	37	39	375	432	360	400	-13.3	-10.0
				(15.08)	(13.49)				
No. 2	100-450	34	39	266	300	250	300	-11.2	-16.7
				(13.09)	(14.38)				
No. 3	100-300	25	34	186	191	200	200	-2.3	0.0
				(10.09)	(9.47)				
Basswood									
Prime	160-500	22	21	335	356	310	400	-5.8	-22.5
				(20.40)	(21.20)				
No. 1	160-400	26	23	256	291	250	300	-12.1	-16.7
				(13.43)	(15.05)				
No. 2	100-300	26	21	203	227	200	220	-10.5	-9.1
				(9.14)	(8.76)				
No. 3	100-215	17	20	163	167	160	180	-2.3	-11.1
				(8.41)	(10.35)				
Beech									
Prime	100-450	20	24	221	226	218	200	-2.1	8.8
				(17.43)	(13.20)				
No. 1	100-350	20	22	202	212	200	200	-4.8	0.0
				(11.94)	(11.41)				
No. 2	100-300	19	23	189	197	200	200	-4.2	0.0
				(10.99)	(9.78)				
No. 3	100-250	18	26	173	176	170	180	-1.7	-5.6
				(10.44)	(8.86)				
Cottonwood									
Prime	100-200	11	17	152	159	160	150	-4.5	6.7
				(9.32)	(9.76)				
No. 1	120-200	9	15	151	161	150	150	-6.1	0.0
				(7.9)	(11.02)				
No. 2	120-160	7	16	147	158	150	150	-6.9	0.0
				(6.06)	(10.13)				
No. 3	100-180	12	20	144	160	150	150	-9.9	0.0
				(6.45)	(8.72)				

1 Standard error of the mean is given in parentheses below the mean.

Table 2. Prices paid for delivered sawlogs by Indiana sawmills, May 2000 and May 2001, continued.

Species/Grade	01 Range ($/MBF)	No. Respon 2001	No. Respon 2000	Mean (s.e.)[1] 2001 ($/MBF)	Mean (s.e.)[1] 2000 ($/MBF)	Median 2001 ($/MBF)	Median 2000 ($/MBF)	Change % Mean	Change % Median
Cherry									
Prime	700-3000	31	39	1276 (79.84)	1245 (47.88)	1200	1200	2.5	0.0
No. 1	150-1750	35	39	874 (50.69)	918 (34.73)	850	900	-4.8	-5.6
No. 2	160-1100	36	38	556 (36.83)	567 (27.20)	500	600	-1.9	-16.7
No. 3	100-700	31	36	290 (25.34)	248 (14.15)	250	245	16.7	2.0
Elm									
Prime	150-300	12	21	192 (13.09)	201 (13.77)	180	200	-4.0	-10.0
No. 1	150-220	15	22	191 (5.98)	190 (10.30)	200	200	0.5	0.0
No. 2	150-230	15	21	183 (6.09)	182 (8.61)	180	180	0.5	0.0
No. 3	120-215	14	23	169 (7.34)	170 (8.88)	160	180	-0.6	-11.1
S. Hickory									
Prime	215-500	26	30	341 (15.98)	370 (18.07)	320	350	-8.0	-8.6
No. 1	160-450	31	32	267 (10.96)	289 (13.02)	250	285	-7.6	-12.3
No. 2	100-300	28	26	205 (7.56)	227 (9.89)	200	215	-9.6	-7.0
No. 3	100-225	27	29	170 (6.55)	175 (9.30)	180	180	-2.6	0.0
Hard Maple									
Prime	450-1200	31	34	768 (36.48)	890 (42.96)	800	900	-13.7	-11.1
No. 1	300-1000	35	38	582 (31.05)	642 (25.30)	550	625	-9.3	-12.0
No. 2	100-560	36	37	373 (23.13)	389 (21.30)	350	400	-4.1	-12.5
No. 3	100-300	27	36	198 (11.17)	204 (10.15)	200	200	-3.1	0.0
Soft Maple									
Prime	200-600	26	29	362 (20.18)	392 (19.47)	350	400	-7.7	-12.5
No. 1	160-500	32	34	293 (15.96)	308 (13.75)	250	300	-5.0	-16.7
No. 2	150-350	29	30	225 (11.19)	224 (8.64)	200	235	0.4	-14.9
No. 3	100-250	21	29	168 (7.99)	176 (8.58)	160	180	-4.6	-11.1

[1] Standard error of the mean is given in parentheses below the mean.

Table 2. Prices paid for delivered sawlogs by Indiana sawmills, May 2000 and May 2001, cont.

Species/Grade	2001 Range	No. Respon. 2001	No. Respon. 2000	Mean (s.e.)1 2001	Mean (s.e.)1 2000	Median 2001	Median 2000	Change (%) Mean	Change (%) Median
White Oak	($/MBF)			($/MBF)		($/MBF)			
Prime	450-1000	30	38	674 (25.26)	715 (32.79)	650	700	-5.8	-7.1
No. 1	200-650	35	40	469 (17.34)	523 (19.33)	450	500	-10.3	-10.0
No. 2	160-475	36	39	299 (12.03)	334 (13.47)	300	300	-10.6	0.0
No. 3	100-335	25	37	188 (9.52)	194 (9.68)	200	200	-3.1	0.0
Red Oak									
Prime	250-1000	35	40	762 (23.42)	817 (19.43)	800	800	-6.8	0.0
No. 1	200-750	39	41	576 (17.30)	620 (17.64)	600	600	-7.1	0.0
No. 2	160-600	40	42	377 (15.59)	403 (15.78)	350	400	-6.6	-12.5
No. 3	100-425	34	38	205 (10.31)	212 (11.54)	200	200	-3.3	0.0
Black Oak									
Prime	400-1000	29	34	691 (32.20)	763 (24.58)	700	750	-9.4	-6.7
No. 1	200-700	35	39	483 (22.72)	535 (16.52)	500	500	-9.8	0.0
No. 2	160-500	37	40	307 (12.40)	349 (14.70	300	350	-12.1	-14.3
No. 3	100-300	28	36	189 (9.11)	195 10/07)	200	200	-3.0	0.0
Tulip Poplar									
Prime	250-550	31	34	380 (14.94)	467 (10.43)	400	500	-18.6	-20.0
No. 1	180-450	34	40	288 (11.49)	349 (9.01)	300	350	-17.4	-14.3
No. 2	100-300	32	39	207 (10.82)	244 (7.03)	200	250	-15.2	-20.0
No. 3	100-250	26	35	162 (9.21)	170 (7.33)	160	180	-4.9	-11.1
Sycamore									
Prime	120-350	21	25	213 (12.50)	198 (11.42)	200	200	7.4	0.0
No. 1	120-250	22	24	198 (6.98)	184 (9.67)	200	200	7.6	0.0
No. 2	100-230	21	23	176 (7.41)	171 (8.63)	180	180	2.9	0.0
No. 3	100-215	19	25	165 (7.94)	166 (9.56)	160	160	-0.9	0.0

1 Standard error of the mean is given in parentheses below the mean.

Table 2. Prices paid for delivered sawlogs by Indiana sawmills, May 2000 and May 2001, continued

Species/Grade	2001 Range	No. Respon. 2001	No. Respon. 2000	Mean (s.e)1 2001	Mean (s.e)1 2000	Median 2001	Median 2000	Change (%) Mean	Change (%) Median
Sweetgum	($/MBF)			($/MBF)		($/MBF)			
Prime	100-250	14	20	179 (37.01)	211 (16.40)	190	200	-15.2	-5.0
No. 1	100-215	14	20	172 (34.37)	201 (12.73)	180	200	-14.5	-10.0
No. 2	100-230	13	19	169 (34.67)	180 (9.74)	160	200	-6.2	-20.0
No. 3	100-215	14	20	161 (20.32)	167 10.72)	160	168	-3.6	-4.8
Black Walnut									
Prime	650-1500	27	32	978 (34.00)	1043 (69.60)	1000	1000	-6.3	0.0
No. 1	200-1200	33	34	760 (30.37)	725 (31.08)	700	800	4.8	-12.5
No. 2	160-850	33	34	508 (36.63)	453 (21.83)	500	488	12.1	2.5
No. 3	150-600	26	30	270 (19.35)	259 (24.11)	250	225	4.1	11.1
Softwood									
Pine	125-400	7	4	270	188	300	185	39.3	35.1
Red cedar									
Sawlog		1		400		400			
Chipping		1		175		175			

Table 3. Prices paid for delivered veneer logs by Indiana veneer mills, May 1999 and May 2000.

Species/Grade/ Log Dia.	2001 Range	No. Respon. 2001	No. Respon. 2000	Mean (s.e.)1 2001	Mean (s.e.)1 2000	Median 2001	Median 2000	Change (%) Mean	Change (%) Median
Black Walnut				($/MBF)		($/MBF)			
Prime									
12-13	1200-3500	14	12	2207 (181.41)	2208 (241.98)	2000	2000	0.0	0.0
14-15	1200-4250	16	11	2663 (223.44)	2882 (323.85)	2825	2500	-7.6	13.0
16-17	1400-5000	16	12	3453 (279.41)	3521 (356.83)	3125	3000	-1.9	4.2
18-20	1500-6750	14	12	4268 (389.12)	4021 (506.08)	4000	4000	6.1	0.0
21-23	2000-6750	8	10	4312 (610.09)	4850 (547.98)	4125	4750	-11.1	-13.2
24-28	2200-8000	8	9	4746 (730.07)	5333 (777.28	4510	5500	-11.0	-18.0
*28	2500-10000	8	4	5034 (933.16)	7000 (707.11)	4010	6500	-28.1	-38.3
Select									
12-13	900-2500	6	6	1617 (249.56)	1442 (173.41)	1650	1500	12.1	10.0
14-15	1000-3000	6	7	1717 (305.96)	1814 (226.18)	1650	2000	-5.4	-17.5
16-17	1000-3750	6	6	2008 (460.15)	2417 (416.67)	1650	2250	-16.9	-26.7
18-20	1000-4000	5	7	1860 (556.42)	2743 (673.96)	1500	3000	-32.2	-50.0
21-23	1000-4000	3	7	2000 (1000.00)	3243 (930.66)	1000	3500	-38.3	-71.4
24-28	1000-4000	3	6	2167 (927.96)	4033 (1373.96)	1500	4000	-46.3	-62.5
*28	1000-4000	3	3	2167 (927.96)	5333 (2603.42)	1500	5000	-59.4	-70.0

[1] Standard error of the mean is given in parentheses below the mean.

Table 3. Prices paid for delivered veneer logs by Indiana veneer mills, May 1998 and May 1999, cont..

Species/Grade Log Dia.	2001 Range	No. Respon. 2001	No. Respon. 2000	Mean (s.e.)1 2001	Mean (s.e.)1 2000	Median 2001	Median 2000	Change (%) Mean	Change (%) Median
White Oak	($/MBF)			($/MBF)		($/MBF)			
Prime									
13-14	1000-2100	12	9	1538 (99.07)	1461 (122.41)	1500	1500	5.2	0.0
15-17	500-4000	15	12	1880 (203.88)	1750 (121.39)	1900	1675	7.4	13.4
18-20	1000-4000	14	12	2207 (197.64)	2100 (155.94)	2200	2100	5.1	4.8
21-23	1400-4000	11	14	2459 (251.07)	2536 (210.93)	2500	2500	-3.0	0.0
24-28	1400-4000	11	9	2618 (278.90)	3172 (280.02	2800	3500	-17.5	-20.0
*28	1400-5000	10	9	2680 (351.76)	3750 (250.00)	2500	3750	-28.5	-33.3
Select									
13-14	500-1000	4	3	800 (108.1)	1083 (220.48)	850	1000	-26.1	-15.0
15-17	500-2500	6	6	1300 (281.66)	1375 (179.70)	1200	1500	-5.5	-20.0
18-20	900-2500	4	6	1600 (389.44)	1558 (281.19)	1500	1650	2.7	-9.1
21-23	900-2500	4	5	1600 (389.44)	1808 (384.36)	1500	1850	-11.5	-18.9
24-28	1000-2500	4	6	1625 (375.00)	2125 (511.49)	1500	2250	-23.5	-33.3
*28	1000-2500	4	4	1625 (375.00)	3088 (784.85)	1500	3800	-47.4	-60.5

[1] Standard error of the mean is given in parentheses below the mean.

Table 3. Prices paid for delivered veneer logs by Indiana veneer mills, May 1998 and May 1999, cont.

Species/Grade/ Log Dia.	2001 Range ($/MBF)	No. Respon. 2001	No. Respon. 2000	Mean (s.e)1 2001 ($/MBF)	Mean (s.e)1 2000	Median 2001 ($/MBF)	Median 2000	Change (%) Mean	Change (%) Median
Red Oak									
Prime									
16-17	800-1700	13	12	1327 (80.59)	1854 (382.45)	1400	1500	-47.4	-6.7
18-20	800-1800	13	15	1358 (88.22)	1780 (345.20)	1400	1500	-28.4	-6.7
21-23	1000-1750	12	13	1363 (77.88)	1873 (418.89)	1325	1500	-23.7	-11.7
24-28	1000-1750	11	10	1391 (80.57)	1995 (567.28)	1400	1475	-30.3	-5.1
*28	1000-1700	8	9	1406 (86.83)	2161 (623.37)	1450	1600	-34.9	-9.4
Select									
16-17	750-1100	4	7	963 (74.65)	1287 (266.68)	1000	1400	-25.2	-28.6
18-20	750-1100	4	6	963 (74.65)	1517 (327.02)	1000	1400	-36.6	-28.6
21-23	850-1000	3	6	950 (50.00)	1400 (177.01)	1000	1600	-32.1	-37.5
24-28	900-1000	3	6	967 (33.33)	1483 (207.23)	1000	1700	-34.8	-41.2
*28	1000	3	4	1000 (00)	1637 (280.90)	1000	1700	-38.9	-41.2

1 Standard error of the mean is given in parentheses below the mean.

Table 3. Prices paid for delivered veneer logs by Indiana veneer mills, May 1999 and May 2000, cont.

Species/Grade/ Log Dia.	2001 Range	No. Respon. 2001	No. Respon. 2000	Mean (s.e.)1 2001	Mean (s.e.)1 2000	Median 2001	Median 2000	Change (%) Mean	Change (%) Median
Hard Maple	($/MBF)			($/MBF)		($/MBF)			
Prime									
16-20	200-3500	15	12	2260	2288	2400	2000	-1.2	20.0
				(213.54)	(298.11)				
*20	1400-4750	14	10	2625	2950	2500	2750	-11.0	-9.1
				(205.07)	(338.38)				
Select									
16-20	1000-2250	6	9	1342	2066	1150	1500	-35.1	-23.3
				(200.17)	(580.47)				
*20	1000-2250	6	5	1425	1900	1400	2000	-25.0	-30.0
				(188.75)	(331.66)				
Yellow Poplar									
Prime									
16-20	400-650	5	6	570	608	600	600	-6.3	0.0
				(46.37)	(23.86)				
*20	500-650	5	5	590	640	600	600	-7.8	0.0
				(29.15)	(43.01)				
Select									
16-20	0	1	3	600	467	600	500	28.5	20.0
				n.a.	33.33				
*20	0	1	2	600	550	600	550	9.1	9.1
				n.a.	50.00				

CUSTOM COSTS

Reported costs were up for custom sawing and logging. The decline in the reported cost of hauling is too small to be statistically significant. Haul distances continue to remain in the 50 mile range because of the large number of mills throughout Indiana. Veneer logs and high quality sawlogs are hauled much greater distances. Kentucky continues to be a woodbasket for Indiana mills because of the greater concentration of speciality mills in Indiana. Speciality mills are those focusing on a particular species and producing speciality products such as quarter-sawn white oak.

Table 4. Custom costs reported by Indiana mills, May 2000, and May 2001.

	No. Responses	2001 Range	Mean 2001	Mean 2000	Median 2001	Median 2000
Sawing ($/MBF)	17	130-500	231	214	200	200
Logging ($/MBF)	4	100-140	115	105	110	90
Hauling ($/MBF)	4	30-60	48	50	50	40
Distance (Miles)	10	20-50	38	40	40	40
$/MBF/Mile	n.a.	n.a.	1.26	1.25	1.25	1.00

MISCELLANEOUS PRODUCTS

The average price paid for logs converted to pallet lumber in bolt mills was up slightly, Table 5, on a MBF basis but down on a tonnage basis. Pulpchip prices were up, as was pulpwood. Sawdust and bark prices were mixed. The small sample size and wide range in reported prices makes it difficult to detect statistically significant changes from year to year.

Table 5. Prices of miscellaneous products reported by Indiana mills, May 2000 and May 2001, fob the producing mill.

			Mean		Median	
	No. Responses	2000 Range	2001	2000	2001	2000
Pallet logs, $/MBF	30	100-350	188	185	200	200
Pallet logs, $/ton	2	24-28	26	30	26	30
Pulpwood, $/ton	5	5-15	23	22	24	24
Pulp Chips, $/ton	16	13-40	20	18	18	17
Sawdust, $/ton	12	1-7	3	7	3	6
Sawdust, $/cu.yd.	7	2-21	9	2.86	8	2.50
Bark, $/ton	2	2-6	9	9	7	8
Bark, $/cu.yd.	29	3-20	7.50	7	6	6.50
Mixed, $/ton	9	3-25	5	9	5	8.50
Mixed, $/cu. Yd.	1	18	18	7	18	7

INDIANA TIMBER PRICE INDEX – UPDATE

The delivered log prices collected in the Indiana Forest Products Price Survey are used to calculate the delivered log value of typical stands of timber. This provides trend-line data that can be used to monitor long-term price trends for timber. The species distribution used to calculate the weighted averages are presented in Table 6. The log quality weights used are presented in Table 7. These weights are based primarily on the 1967 Forest Survey of Indiana.

The nominal (not deflated) price, columns 3 and 6 of Table 8, are a weighted average of the delivered log prices reported in the price survey. The price indexes, columns 4 and 7, are the series of nominal prices divided by the price in 1957, the base year multiplied by 100. Thus, the index is the percentage of the 1957 price. For example, the average price in 2001 was 706.9 percent of the price in 1957. The real prices, columns 5 and 8 are the actual prices deflated by the producer price index for finished goods with 1982 as the base year, Table 8, column 2. The real price series represents the purchasing power of dollars based on a 1982 market basket of industrial goods. It's this real price trend that is important to long-term investments like timber.

Average Stand

The nominal weighted average price decreased from $426.5 per MBF in 2000 to $393.1 in 2001for the average stand, Table 10, column 3. Remember that this series is based on delivered log prices, not stumpage prices. This is a 7.8 percent decrease, Figure 2. The deflated or real price dropped from $308.9 per MBF to $276.7, a 10.4 percent decrease, Figure 2. However, because this trend is based on 45 years if data this drop was not enough to make much difference in the trend line for the deflated price series.

The new equation for the trend line for the 1957 to 2001 period is,

$$\text{Avg. Stand Price} = 166.47 + 2.60 \times T,$$

where,

T=1 for 1957, 2 for 1958, etc.

A linear trend line should be used if it's necessary to project timber prices, as discussed in greater detail in Station Bulletin No. 148. Although it's easier to simply plug the average annual compound rate of increase value into the compound interest formula (exponential rate of increase), projections much over 15 years gives unrealistic results. Real prices can't increase exponentially for long periods of time. Market adjustments, like those observed for black walnut, come into play to retard the increase and eventually reverse it.

The real price increase based on the trend line is 1.16 percent per annum for the average stand from 1957 to 2001. This figure was 1.17 percent for the 1957 to 2001 period. Thus, the purchasing power of hardwood timber assets is more than keeping up with inflation.

Quality Stand

The nominal weighted average price for the quality stand decreased by 12.2 percent from $617.6 in 2000 to $542.5 in 2001,Table 10, column 6, Figure 3. The decrease for the real price series was from $447.2 per MBF to $281.8, a 14.6 percent drop.

The average annual compound rate of increase for the trend line declined from 1.52 percent per annum to 1.50 percent Figure 3. The equation for the trend line is,

$$\text{Qual. Index} = 197.12 + 4.38 \times T$$

Thus, the contribution of a real price increase to the total financial return on a quality stand is higher than for the average stand of timber in Indiana. The other components of return are volumetric growth and increases in unit values due to improved log quality as crop trees get bigger. This assumes the stand is managed to favor crop trees with the potential for value increment.

Table 6. Species composition of the Indiana timber price index for an average and a quality stand.

Species	Average Stand	Quality Stand
Veneer species:	(%)	(%)
White oak	13.4	21.0
Red oak	15.1	20.0
Hard maple	9.6	14.0
Yellow poplar	7.5	9.0
Black walnut	5.4	5.0
Non-veneer species:		
White ash	5.8	3.1
Basswood	1.5	3.1
Beech	5.6	3.1
Cottonwood	6.2	3.1
Black cherry	0.8	3.1
Elm	1.2	3.1
Hickory	4.7	3.1
Soft maple	6.7	3.1
Black oak	11.4	3.1
Sycamore	5.1	3.1

Table 7. Log quality composition of the Indiana timber price index for an average and a quality stand.

	Average Stand		Quality Stand	
Log Grade	Veneer Species	Non-veneer Species	Veneer Species	Non-veneer Species
Veneer logs	(%)	(%)	(%)	(%)
Prime	1.0	0.0	7.0	0.0
Select	3.0	0.0	13.0	0.0
Sawlogs				
Prime	20.0	24.0	19.0	24.0
No. 1	26.0	26.0	21.0	26.0
No. 2	38.0	38.0	33.0	38.0
No. 3	12.0	12.0	7.0	12.0

Table 8. Weighted average actual price, price index, and deflated price for an average and quality stand of timber in Indiana, 1957 to 2001.

		Average Stand			Quality Stand		
Year	Producer Price Index	Nominal Price	Index Number	Real Price [1]	Nominal Price	Index Number	Real Price [1]
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
		($/MBF)		($/MBF)	($/MBF)		($/MBF)
1957	32.5	55.6	100.0	171.1	66.6	100.0	204.9
1958	33.2	53.7	96.6	161.8	64.0	96.1	192.8
1959	33.1	54.8	98.5	165.5	67.5	101.4	204.0
1960	33.4	57.5	103.5	172.3	68.7	103.2	205.7
1961	33.4	58.9	105.9	176.3	70.0	105.1	209.5
1962	33.5	59.6	107.3	178.1	72.3	108.6	215.8
1963	33.4	59.3	106.7	177.6	74.5	111.9	223.1
1964	33.5	60.1	108.1	179.5	74.4	111.8	222.2
1965	34.1	63.6	114.3	186.4	78.5	118.0	230.3
1966	35.2	68.8	123.7	195.4	86.0	129.2	244.3
1967	35.6	70.1	126.0	196.8	87.2	131.0	245.0
1968	36.6	74.7	134.2	204.0	92.7	139.3	253.4
1969	38.0	77.7	139.7	204.5	98.6	148.2	259.6
1970	39.3	83.1	149.4	211.5	103.9	156.0	264.3
1971	40.5	85.9	154.4	212.0	107.4	161.3	265.2
1972	41.8	90.2	162.2	215.8	112.2	168.5	268.4
1973	45.6	112.6	202.5	247.0	139.0	208.8	304.9
1974	52.6	135.3	243.3	257.3	170.2	255.7	323.7
1975	58.2	125.1	225.0	215.0	166.3	249.8	285.8
1976	60.8	133.6	240.2	219.7	172.7	259.4	284.1
1977	64.7	143.6	258.1	221.9	188.0	282.4	290.6
1978	69.8	181.7	326.1	260.3	234.9	352.9	336.6
1979	77.6	201.5	362.3	259.6	260.7	391.6	336.0
1980	88.0	207.8	373.6	236.1	309.3	464.5	351.5
1981	96.1	206.7	371.7	215.1	284.9	427.8	296.4
1982	100.0	196.8	353.8	196.8	277.3	416.5	277.3
1983	101.6	207.6	373.3	204.3	294.4	442.2	289.8
1984	103.7	235.8	424.0	227.4	322.7	484.6	311.2
1985	104.7	210.5	378.5	201.0	274.0	411.5	261.7
1986	103.2	223.6	402.0	216.6	312.2	468.9	302.5
1987	105.4	257.3	462.7	244.2	334.6	502.6	317.5
1988	108.0	262.1	471.3	242.7	345.9	519.6	320.3
1989	113.6	285.9	514.0	251.6	404.9	608.1	356.4
1990	119.2	288.3	518.3	241.8	397.9	597.6	333.8
1991	121.7	268.1	482.1	220.3	362.9	545.1	298.2
1992	123.2	293.4	527.6	238.2	417.6	627.1	338.9
1993	124.7	355.2	638.8	284.9	491.2	737.8	393.9
1994	125.5	364.8	655.9	290.6	507.4	762.1	404.3
1995	127.9	354.0	636.4	276.7	451.6	678.3	353.1
1996	131.3	337.7	607.1	257.2	495.4	744.0	377.3
1997	131.8	357.5	642.7	271.2	448.3	673.3	340.2
1998	130.7	391.1	703.3	299.3	501.7	753.5	383.9
1999	133.0	389.2	699.8	292.6	526.3	790.5	395.7
2000	138.1	426.5	766.9	308.9	617.6	927.5	447.2
2001	142.1	393.1	706.9	276.7	542.5	814.8	381.8

[1] Actual price deflated by Producer Price Index for Finished Goods, U.S. Dept. Commerce, 1982 base year.

Figure 2. Average stand of timber, nominal, deflated, and trend line price series, 1957 to 2001.

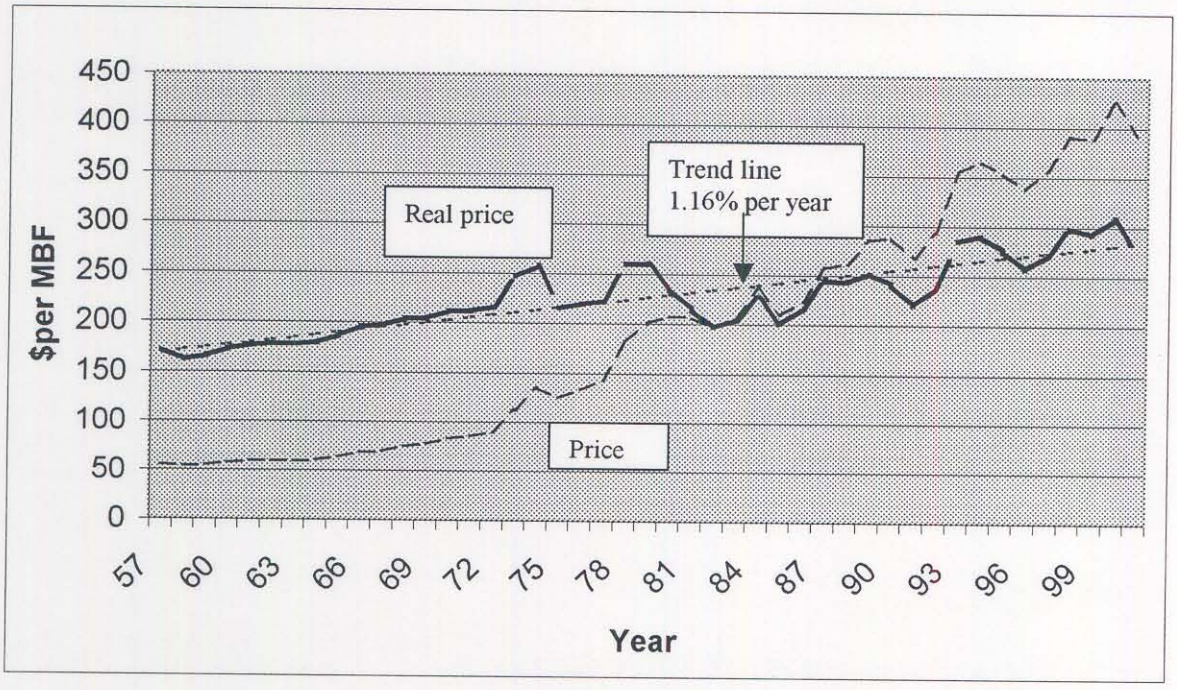


Figure 3. Quality stand of timber, nominal, deflated, and trend line price series 1957 to 2001.