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# 1995 Indiana Forest Products Price Report and Trend Analysis

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**1995 INDIANA FOREST PRODUCTS PRICE  
REPORT AND TREND ANALYSIS**

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### SUMMARY

A questionnaire requesting prices paid for timber products was sent to all known commercial sawmills and veneer mills in the state of Indiana. Sixty-two of the 230 mills surveyed responded with 52 providing usable data.

Compared to May 1994, prices paid for sawlogs decreased overall; however, increases occurred for the premium species. Veneer log prices were down except for smaller prime red oak.

The overall price trend remains positive, however. The trend line for the real price of the average stand continues to reflect a real price increase of 1.1 percent per annum. The trend for quality stands continues to show a 1.8 percent per annum increase. Thus, adequately stocked stands of hardwood timber in Indiana continue to represent a sound investment opportunity. These stands provide very competitive real rates of return with income tax deferral on accumulated unrealized value increases. They also provide the opportunity to use the step-up in asset basis to avoid income tax liability prior to passing the wealth to heirs. Timber owners should consult a professional forester to properly assess the options available to manage and market their timber assets.

## INTRODUCTION

The Department of Forestry and Natural Resources, Purdue University in cooperation with the Indiana Agricultural Statistics Service has conducted a formal survey of Indiana sawmills and veneer mills since at least 1957. The primary data collected is the price paid for logs delivered to the mills. From 1957 to 1976 the results were published as an Extension Circular. From 1977 to 1989 the results were published in the Indiana Forest Products Marketing and Wood Utilization Report. The results also appear in the *Woodland Steward* published by the Woodland Steward Institute, a cooperative effort of Indiana's leading natural resource organizations.

## METHODOLOGY

The questionnaire was mailed by the Indiana Agricultural Statistics Service in early May of 1995 to the 230 mills listed in the data base as buying logs. The data base is maintained by the Department of Forestry and Natural Resources in cooperation with Robert W. Mayer, Utilization Specialists, Indiana Department of Natural Resources, Division of Forestry. A second mailing was made three weeks later to non respondents. Two weeks later enumerators from Ag. Statistics called the larger mills who had not responded to request their assistance.

A total of 230 questionnaires were mailed. Sixty-two mills responded, the same number as 1994. The overall response rate was 27 percent (62/230). Ten provided no data. Thus, the decline in response rate has at least leveled off. The small number of reports for some species and product classes, especially veneer logs, makes the data suspect, and year-to-year variations very large. The size distribution of mills included in the survey is presented in Table 1. No attempt was made to sample non-respondents. Therefore, it must be assumed that the response is biased. The standard errors should be used for year-to-year comparisons only.

Responses were analyzed using a PC-based SPSS package. Data that appeared to be in error were purged. For example, if the responses for a category included many mills reporting prices of \$40, \$50, \$60, \$70, \$80, and so on, but only one mill reporting \$240, the \$240 response was discarded.

The median price shown in Tables 2 and 4 is the reported price that divides the distribution into two equal halves. The median and mean would have the same value if the distribution was an exact bell-shaped normal curve. The standard error of the mean (s.e.) is a measure of the variability of the responses. It indicates the amount by which the mean would vary if a different set of mills had responded to the survey. Note that the standard error is relatively small for those species/grade categories for which ten or more mills responded, but is high for categories for which only a few mills responded.

## SAWLOG PRICES

Sawlog prices overall were lower compared to May of 1994, Table 2. Important exceptions were ash, black cherry and the oaks. The survey took place just as hardwood lumber markets were starting to soften in late winter. Further declines in some species have occurred since the survey. Table 3 shows lumber prices through the first of June 1995. Ash, black cherry, and white oak prices were still strong then, but red oak was starting to soften.

The supply of lumber in the non-premium species has more than caught up with demand due to a slowdown in overall economic activity. In a downturn declines in log prices on a percentage basis are much greater than the decline in lumber prices. This can be seen by comparing log prices, and lumber prices for beech, cottonwood, elm, soft maple, sycamore, and gum, Figures 1 to 13. Black walnut log prices declined somewhat less. A \$15 reduction in FAS black walnut lumber represents a significant change for this species. Walnut lumber prices change infrequently, Figure 14.

Table 1. Type of mills included in data base.

Sawmills (SIC 2421)	Total
	237 <sup>1</sup>
Size Class (MBF)	
1 - 100	66
100 - 500	42
500 - 1,000	25
1,000 - 2,000	40
2,000 - 4,000	46
4,000 - 7,000	10
> 7,000	8
Veneer (SIC 2435)	15
Cooperage (SIC 2429)	2
Other	10
Total	

<sup>1</sup> Most custom mills didn't receive the questionnaire since they are listed in the data base as not buying logs.

Table 2. Prices paid for delivered sawlogs by Indiana sawmills, May 1994 and May 1995.

Species/Grade	Range (\$/MBF)	No. Respon.		Mean (s.e.) <sup>1</sup>		Median		Change (%)	
		1994	1995	1994	1995	1994	1995	Mean	Median
White Ash									
Prime	450-800	26	24	581 (16.9)	642 (16.4)	600	650	10.5	8.3
No. 1	300-600	29	24	427 (16.2)	459 (16.6)	420	500	7.5	19.1
No. 2	120-450	26	22	291 (17.2)	285 (20.1)	300	265	-2.1	-11.7
No. 3	100-300	20	16	184 (9.3)	179 (12.4)	200	180	-2.7	-10.0
Basswood									
Prime	150-500	21	15	317 (22.8)	283 (30.4)	300	250	-10.7	-16.7
No. 1	120-400	22	18	252 (19.0)	238 (19.8)	250	200	-5.6	-20.0
No. 2	100-260	22	17	191 (15.6)	184 (10.8)	200	200	-3.7	0.0
No. 3	100-200	16	13	164 (11.5)	149 (8.0)	170	150	-14.0	-11.8
Beech									
Prime	140-300	18	14	221 (12.5)	207 (11.3)	200	200	-6.3	0.0
No. 1	120-250	19	14	212 (11.7)	175 (9.4)	200	170	-17.5	-15.0
No. 2	100-250	17	15	173 (12.3)	155 (10.5)	200	150	-10.4	-25.0
No.3	100-200	14	12	159 (13.8)	150 (9.0)	155	155	-2.5	0.0
Cottonwood									
Prime	100-150	12	7	161 (13.3)	134 (6.9)	165	140	-16.8	-15.2
No. 1	100-150	12	8	167 (14.8)	133 (6.2)	170	140	-20.4	-17.7
No. 2	100-150	11	7	145 (15.4)	130 (6.5)	150	140	-10.3	-6.7
No. 3	100-180	10	7	137 (14.8)	139 (9.4)	135	140	1.5	3.7

<sup>1</sup> Standard error of the mean is given in parentheses below the mean.

Table 2. Prices paid for delivered sawlogs by Indiana sawmills, May 1994 and May 1995, continued.

Species/Grade	Range (\$/MBF)	No. Respon.		Mean (s.e.) <sup>1</sup>		Median		Change (%)	
		1994	1995	1994 (\$/MBF)	1995 (\$/MBF)	1994 (\$/MBF)	1995 (\$/MBF)	Mean	Median
Cherry									
Prime	600-1200	24	23	742 (30.5)	817 (29.9)	700	800	10.1	12.5
No. 1	300-800	28	24	552 (27.9)	591 (29.7)	500	600	7.1	20.0
No. 2	120-700	26	22	345 (24.1)	360 (31.3)	300	325	4.4	7.7
No. 3	100-300	19	17	188 (9.9)	194 (12.2)	200	200	3.2	0.0
Elm									
Prime	100-250	15	7	209 (13.2)	176 (18.2)	200	180	-15.8	-10.0
No. 1	100-240	17	10	208 (13.3)	169 (13.9)	200	170	-18.8	-15.0
No. 2	100-180	17	7	184 (11.0)	154 (10.7)	200	160	-16.3	-20.0
No. 3	100-180	13	8	167 (12.8)	149 (9.9)	160	155	-10.8	-3.1
S. Hickory									
Prime	140-400	19	15	241 (13.5)	239 (17.3)	250	200	-0.8	-20.0
No. 1	140-350	21	16	228 (12.9)	207 (15.0)	200	200	-9.2	0.0
No. 2	80-250	19	16	183 (10.7)	161 (10.2)	200	155	-12.0	-22.5
No. 3	100-180	15	11	160 (12.1)	140 (8.0)	150	150	-12.3	0.0
Hard Maple									
Prime	260-700	26	20	522 (25.3)	505 (27.4)	500	500	-3.3	0.0
No. 1	160-600	30	23	400 (23.4)	374 (27.1)	400	350	-6.5	-12.5
No. 2	140-400	26	21	279 (20.8)	247 (16.7)	290	250	-11.5	-13.8
No. 3	100-240	20	17	183 (10.6)	158 (9.1)	200	150	-13.7	-25.0
Soft Maple									
Prime	160-500	21	18	281 (13.5)	279 (19.6)	300	250	-0.7	-16.7
No. 1	140-370	25	20	245 (16.3)	219 (15.1)	220	200	-10.6	-9.1
No. 2	90-260	23	20	201 (12.3)	171 (9.3)	200	170	-14.9	-15.0
No. 3	100-180	16	13	171 (11.3)	142 (7.6)	170	150	-17.0	-11.8

<sup>1</sup> Standard error of the mean is given in parentheses below the mean.

Table 2. Prices paid for delivered sawlogs by Indiana sawmills, May 1994 and May 1995, cont.

Species/Grade	Range	No. Respon.		Mean (s.e.) <sup>1</sup>		Median		Change (%)	
		1994	1995	1994	1995	1994	1995	Mean	Median
White Oak	(\$/MBF)			(\$/MBF)		(\$/MBF)			
Prime	500-800	25	23	618 (24.5)	648 (17.9)	600	600	4.9	0.0
No. 1	300-625	28	24	447 (20.9)	469 (20.4)	450	500	4.9	11.1
No. 2	100-550	27	25	298 (20.3)	310 (21.6)	300	300	4.0	0.0
No. 3	100-250	19	18	183 (9.6)	181 (8.7)	200	180	-1.1	-10.0
Red Oak									
Prime	650-900	26	23	718 (21.9)	755 (14.5)	700	700	5.2	0.0
No. 1	400-750	28	24	546 (23.3)	564 (21.4)	565	550	3.3	-2.7
No. 2	120-700	27	25	352 (26.6)	368 (27.4)	350	350	4.6	0.0
No. 3	100-250	19	19	195 (10.0)	184 (8.9)	200	200	-5.6	0.0
Black Oak									
Prime	600-800	22	20	616 (28.9)	682 (14.7)	650	700	10.7	7.7
No. 1	300-700	27	23	455 (25.0)	494 (20.7)	450	500	8.6	11.1
No. 2	90-600	24	23	309 (20.7)	312 (22.6)	288	300	1.0	4.2
No. 3	100-250	17	16	183 (9.8)	176 (9.1)	200	180	-3.8	-10.0
Tulip Poplar									
Prime	260-600	26	24	384 (11.5)	413 (14.2)	400	400	7.6	0.0
No. 1	160-400	29	24	293 (14.4)	289 (13.3)	300	300	-1.4	0.0
No. 2	90-260	25	22	220 (11.1)	199 (9.3)	200	200	-9.6	0.0
No. 3	100-200	17	14	171 (10.5)	150 (7.0)	160	150	-12.3	-6.3
Sycamore									
Prime	120-350	17	16	199 (12.1)	188 (13.1)	200	200	-5.5	0.0
No. 1	100-200	16	15	185 (13.3)	153 (8.8)	190	150	-17.3	-21.1
No. 2	80-250	15	15	157 (12.5)	148 (11.5)	160	150	-5.7	-6.3
No. 3	100-180	14	13	154 (13.1)	138 (8.5)	155	150	-10.4	-3.2

<sup>1</sup> Standard error of the mean is given in parentheses below the mean.



Table 2. Prices paid for delivered sawlogs by Indiana sawmills, May 1994 and May 1995, continued

Species/Grade	Range (\$/MBF)	No. Respon.		Mean (s.e) <sup>1</sup>		Median		Change (%)	
		1994	1995	1994	1995	1994	1995	Mean	Media n
Sweetgum									
Prime	140-300	15	14	209 (10.4)	195 (12.2)	200	190	-6.7	-5.0
No. 1	100-250	14	15	188 (8.7)	165 (9.1)	200	160	-12.2	-20.0
No. 2	80-200	13	15	168 (13.0)	145 (7.8)	160	150	-13.7	-6.3
No. 3	100-180	11	12	150 (16.5)	139 (7.9)	150	150	-7.3	0.0
Black Walnut									
Prime	500-1500	20	20	1035 (103.4)	973 (53.7)	1000	1000	-6.0	0.0
No. 1	400-1200	24	22	725 (37.7)	741 (45.2)	725	775	2.2	6.9
No. 2	180-1000	25	22	470 (33.0)	461 (46.9)	500	400	-1.9	-20.0
No. 3	100-450	15	17	215 (14.1)	210 (23.9)	200	200	-2.3	0.0
Softwood									
Pine	240	1	1	240	240	240	240	0.0	0.0
Red cedar		1	1	350	400	350	400	14.3	14.3

<sup>1</sup> Standard error of the mean is given in parentheses below the mean.

Table 3. Hardwood Lumber prices, 4/4 Appalachian unless otherwise indicated (Hardwood Market Report, Memphis, Tenn), \$ per MBF.

	Lumber Grade	Jan. 1992	July 1992	Jan. 1993	July 1993	Jan. 1994	July 1994	Jan 1995	June 1995
Ash	FAS + Premium	730	805	830	860	860	870	935	970
	No. 1C	475	475	485	545	565	630	695	725
	No. 2A	195	195	220	265	285	330	365	380
Basswood	FAS + Premium	650	655	655	675	675	690	710	710
	No. 1C	305	310	310	320	320	335	350	350
	No. 2A	177	177	190	225	225	225	225	225
Beech	FAS	300	320	335	385	395	425	440	440
	No. 1C	260	280	295	345	355	385	400	400
	No. 2A	200	220	235	275	285	315	325	325
Cottonwood (Southern)	FAS	410	450	480	515	555	625	635	625
	No. 1C	290	300	315	340	380	430	435	425
	No. 2A	150	150	170	220	240	260	255	240
Cherry	FAS + Premium	1,275	1,375	1,400	1,495	1,510	1,585	1,685	1,725
	No. 1C	620	700	850	1025	1040	1,040	1,040	990
	No. 2A	285	335	450	575	590	590	590	550
Elm (Southern)	FAS	335	335	335	340	345	355	355	355
	No. 1C	315	315	315	320	325	335	335	335
	No. 2B	200	200	215	260	265	270	270	270
Hickory	FAS	335	340	355	395	405	445	455	455
	No. 1C	315	320	335	375	385	425	435	435
	No. 2A	195	200	210	240	245	265	265	265
Hard Maple	FAS + Premium	660	835	940	1,075	1,030	1,015	1,015	1,015
	No. 1C	430	535	650	760	750	730	675	660
	NO. 2A	265	335	415	495	485	475	425	400
Soft Maple	FAS + Premium	565	615	680	805	815	825	825	760
	No. 1C	405	445	495	590	600	610	600	560
	No. 2A	250	280	320	395	405	410	400	365
White Oak -Plain	FAS + Premium	980	1,010	1,010	955	880	880	975	990
	No. 1C	475	535	540	540	535	535	565	585
	No. 2A	250	290	320	390	340	325	315	315
Red Oak-Plain	FAS + Premium	885	990	1,065	1,140	1,140	1,170	1,275	1,265
	No. 1C	555	675	780	800	780	750	740	735
	No. 2A	285	350	400	485	455	420	400	400
Yellow Poplar	FAS + Premium	510	545	570	615	710	750	750	685
	No. 1C	280	295	320	420	425	425	420	365
	No. 2A	195	200	215	315	310	305	275	240

Table 3. Hardwood Lumber prices, 4/4 Appalachian unless otherwise indicated (Hardwood Market Report, Memphis, Tenn), \$ per MBF, cont.

	Lumber Grade	Jan. 1992	July 1992	Jan. 1993	July 1993	Jan. 1994	July 1994	Jan. 1995	June 1995
Sycamore (Southern, Plain)	FAS	320	330	340	365	415	445	455	455
	No. 1C	300	310	320	345	395	425	435	435
	No. 2A	265	275	280	305	350	370	375	375
Black Walnut	FAS	1,605	1,605	1,605	1,605	1,615	1,615	1,615	1,600
	No. 1C	855	855	855	855	855	855	855	855
	No. 2A	290	290	290	290	290	290	290	290

### VENEER LOG PRICES

Veneer log prices were down for all species included in the survey, Table 4. Red oak declined the least and showed increases in the smaller sizes classes. Black walnut prices were down by about 2 percent for small prime logs, but down by at least 20 percent in the larger prime and all sizes of select.

Table 4. Prices paid for delivered veneer logs by Indiana veneer mills, May 1994 and May 1995.

Species/Grade/Log Dia.	1995 Range	No. Respon.		Mean (s.e.) <sup>1</sup>		Median		Change (%)	
		1994	1995	1994 (\$/MBF)	1995 (\$/MBF)	1994 (\$/MBF)	1995 (\$/MBF)	Mean	Median
<b>Black Walnut</b>									
<b>Prime</b>									
12-13	600-3000	7	8	1786 (184.4)	1750 (277.7)	2000	1750	-2.0	-12.5
14-15	800-4000	8	8	2438 (175.2)	2369 (401.1)	2250	2250	-2.8	0.0
16-17	800-5000	8	8	3500 (313.4)	2775 (526.0)	3000	2750	-20.7	-8.3
18-20	1200-7000	6	7	4500 (447.2)	3729 (917.2)	4250	3000	-17.1	-29.4
21-23	1200-9000	3	6	4833 (441.0)	3600 (1219.8)	5000	2500	-25.5	-50.0
24-28	1200-10000	3	6	5833 (1166.7)	4017 (1388.6)	5500	2750	-31.1	-50.0
>28	1200-10000	3	6	6500 (1802.8)	4183 (1445.1)	5500	2750	-35.7	-50.0
<b>Select</b>									
12-13	500-1500	5	5	1300 (137.8)	1080 (217.7)	1500	1400	-16.9	-6.7
14-15	500-2500	6	5	1667 (166.7)	1400 (356.4)	1750	1400	-16.0	-20.0
16-17	500-3000	6	5	2417 (374.5)	1540 (446.8)	2000	1400	-36.3	-30.0
18-20	800-4000	4	4	3750 (750.0)	1800 (743.9)	3000	1200	-52.0	-60.0
21-23	800-4000	1	4	4000	1800 (743.9)	4000	1200	-55.0	-70.0
24-28	800-5000	1	4	7000	2050 (991.2)	7000	1200	-70.7	-82.9
>28	800-6000	1	4	8000	2300 (1239.6)	8000	1200	-71.3	-85.0

<sup>1</sup> Standard error of the mean is given in parentheses below the mean

Table 4. Prices paid for delivered veneer logs by Indiana veneer mills, May 1994 and May 1995, cont..

Species/Grade Log Dia.	1994 Range (\$/MBF)	No. Respon.		Mean (s.e.) <sup>1</sup>		Median		Change (%)	
		1994	1995	1994	1995	1994	1995	Mean	Median
White Oak Prime				(\$/MBF)		(\$/MBF)			
13-14	700-1500	7	7	1304 (110.5)	1129 (114.4)	1300	1200	-13.4	-7.7
15-17	700-2200	8	7	1616 (184.5)	1336 (206.7)	1588	1350	-17.3	-15.0
18-20	700-2500	9	7	1875 (235.2)	1721 (223.0)	2000	1750	-8.2	-12.5
21-23	700-3000	7	6	2718 (296.5)	1992 (316.3)	2500	2000	-26.7	-20.0
24-28	700-3000	3	5	2458 (325.4)	1940 (365.5)	2500	2000	-21.1	-20.0
>28	700-3000	2	5	2438 (562.5)	2040 (382.9)	2438	2000	-16.3	-18.0
Select									
13-14	700-800	4	3	1150 (144.3)	767 (33.3)	1150	800	-33.3	-30.4
15-17	700-1350	4	4	1350 (210.2)	963 (143.4)	1400	900	-28.7	-35.7
18-20	700-1500	4	4	1550 (165.8)	1175 (197.4)	1500	1250	-24.0	-16.7
21-23	700-1750	4	3	1731 (155.9)	1317 (316.7)	1750	1500	-23.9	-14.3
24-28	700-1750	2	3	1813 (187.5)	1317 (316.7)	1813	1500	-27.4	-17.3
>28	700-1800	1	3	1625 (358.6)	1417 (358.6)	1625	1750	-12.8	7.7

<sup>1</sup> Standard error of the mean is given in parentheses below the mean.

Table 4. Prices paid for delivered veneer logs by Indiana veneer mills, May 1993 and May 1994, cont.

Species/Grade/ Log Dia.	1994 Range (\$/MBF)	No. Respon.		Mean (s.e) <sup>1</sup> (\$/MBF)		Median (\$/MBF)		Change (%)	
		1994	1995	1994	1995	1994	1995	Mean	Media n
Red Oak Prime									
16-17	900-1700	5	5	1250 (124.5)	1260 (163.1)	1200	1100	0.8	-8.3
18-20	900-2000	5	5	1230 (149.7)	1380 (220)	1200	1200	12.2	0.0
21-23	900-1800	3	4	1433 (145.3)	1225 (201.6)	1400	1100	-14.5	-21.4
24-28	900-1800	2	4	1300 (100.0)	1225 (201.6)	1300	1100	-5.8	-15.4
>28	900-1800	2	4	1300 (100.0)	1225 (201.6)	1300	1100	-5.8	-15.4
Select									
16-17	800-900	2	2	1350 (150.0)	850 (50)	1350	850	-37.0	-37.0
18-20	800-900	2	2	1700 (300.0)	850 (50)	1700	850	-50.0	-50.0
21-23	500-900	1	2	1400	700 (200)	1400	700	-50.0	-50.0
24-28	900-1000	1	2	1200	950 (50)	1400	950	-20.8	-32.1
>28	900-1000	1	2	1200	950 (50)	1200	950	-20.8	-20.8

<sup>1</sup> Standard error of the mean is given in parentheses below the mean.

Table 4. Prices paid for delivered veneer logs by Indiana veneer mills, May 1994 and May 1995, cont.

Species/Grade /Log Dia.	1994 Range (\$/MBF)	No. Respon.		Mean (s.e.) <sup>1</sup>		Median		Change (%)		
		1994	1995	1994 (\$/MBF)	1995 (\$/MBF)	1994 (\$/MBF)	1995 (\$/MBF)	Mean	Median	
Hard Maple Prime	16-20	450-1700	7	4	1100 (198.8)	1163 (279)	1000	1250	5.7	25.0
	>20	450-2000	5	4	1080 (213.1)	1013 (349.0)	1200	800	-6.2	-33.3
	16-20	450-1000	4	3	925 (228.7)	683 (164.1)	900	600	-26.2	-33.3
	>20	450	3	2	1217 (462.2)	450 (0.0)	1250	450	-63.0	-64.0
Tulip Poplar Prime	16-20	450-600	6	4	517 (57.3)	500 (35.4)	525	475	-3.3	-9.5
	>20	450-700	4	4	525 (52.0)	563 (65.7)	525	550	7.2	4.8
	16-20	300-450	1	3	500 (50.0)	383 (44.1)	500	400	-23.4	-20.0
	>20	400-450	0	2	400 (25.0)	425 (25.0)	400	425	6.3	6.3

<sup>1</sup> Standard error of the mean is given in parentheses below the mean.

## CUSTOM COSTS AND MISCELLANEOUS PRODUCTS

The few mills reporting custom costs and prices for minor forest products makes analysis difficult.

### Custom Costs

Custom costs as reported in 1994 and 1995 indicate an increase for sawing and logging, Table 5. Hauling costs were down on a per mile basis, most likely because more mills are switching to semis as haul distances increase.

Table 5. Custom costs reported by Indiana mills, May 1994, and May 1995.

	No. Responses	1995 Range	Mean		Median	
			1994	1995	1994	1995
Sawing (\$/MBF)	17	120-300	166	179	165	180
Logging (\$/MBF)	4	70-150	77	94	68	78
Hauling (\$/MBF)	7	40-120	64	68	65	65
Distance (Miles)	7	10-100	42	46	43	35
\$/MBF/Mile	7	0.85-1.67	1.52	1.28	1.52	1.40

### Miscellaneous Products

Prices for miscellaneous products, Table 6, were generally down. The lower price for pallet logs is consistent with decreased demand for industrial wood.

Table 6. Prices of miscellaneous products reported by Indiana mills, May 1994 and May 1995, fob the producing mill.

	No. Responses	1995 Range	Mean		Median	
			1994	1995	1994	1995
Pallet logs, \$/MBF	14	120-280	199	180	200	170
Pulp Chips, \$/ton	13	6.15-21.00	17.53	12.98	16.5	12.75
Sawdust, \$/ton	7	1.10-8.60	6.86	5.71	5.50	5.00
Bark, \$/ton	12	4.00-19.20	15.90	10.30	14.50	10.00



## Handle Logs

Handle log prices were down for all species, Table 7. The number of mills reporting handle log prices increased to five. One mill reported container veneer log prices. They were paying \$180 for beech, sycamore, sweet gum, and black gum; \$250 for soft maple, and \$140 for cottonwood. They also reported paying \$2,250 for Prime, and \$1,750 for No. 1 black cherry veneer logs.

Table 7. Prices paid for handle logs by Indiana mills, May 1994 and May 1995, fob mill.

	No. Responses	1995 Range	Mean	
			1994 (\$/MBF)	1995 (\$/MBF)
White Ash				
No. 1	3	550-700	638	633
No. 2	3	400-550	525	483
No. 3	2	200-350	375	275
Hickory				
No. 1	1	250	250	250
No. 2	2	200-380	---	290
No. 3	0	--	---	--
Sugar Maple				
No. 1	1	600	650	600
No. 2	1	400	500	400
No. 3	1	200	250	200

## 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 8. The log quality weights used are presented in Table 9. These weights are based primarily on the 1967 Forest Survey of Indiana. The weights will be adjusted in the future to reflect changes in species composition and timber quality as reflected in the 1986 Forest Survey.

Table 8. 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
Nonveneer 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 9. Log quality composition of the Indiana timber price index for an average and a quality stand.

Log Grade	Average Stand		Quality Stand	
	Veneer Species	Nonveneer Species	Veneer Species	Nonveneer 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

The nominal (not deflated) price, columns 3 and 6 of Table 10, 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 current (actual) prices divided by the price in 1957, the base year multiplied by 100. Thus, the index is the percentage of the 1957 price. 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, Figure 10. 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.

The results for 1994 are different than those reported in the bulletin for 1994. This is because the producer price index for all of 1994 is used to recalculate the averages for 1994. These recalculations have also occurred in previous years. The changes are usually minor.

### Average Stand

The nominal weighted average price decreased from \$367.6 in 1994 to \$354.9 in 1995 for the average stand, Table 10, column 3. This is a 3.5 percent decrease, smaller than might be expected given the large declines in many species. However, the index is dominated by oak species, a species group that increased except for the lowest grade logs.

The upward adjustment for the average price in 1994 was enough to hold up the trend line for real prices, despite the decline for 1995. The average annual compound rate of increase for the trend line increased slightly 1.08 percent in 1994 to 1.1 percent in 1995, Figure 15. The new equation for the trend line for the 1957 to 1995 period is,

$$\text{Avg. Index} = 171.25 + 2.36 \times T,$$

where,

$$T=1 \text{ for } 1957, 2 \text{ for } 1958, \text{ etc.}$$

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. It's easier to simply plug the average annual compound rate of increase value into the compound interest formula, but for projections much over 15 years, the result is not realistic. 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.

### Quality Stand

The index for the quality stand decreased by 13 percent from 563.1 in 1994 to 490.1 in 1995, Table 10, column 6. The decline was due in large part to declines in reported veneer log prices. Thus, the change is probably overstated because veneer log prices in 1994 were unusually high. The one mill reporting many of the prices was not representative of the more typical average prices reported in recent years.

The average annual compound rate of increase for the trend line stayed the same at 1.8%, Figure 16. The equation for the trend line is,

$$\text{Qual. Index} = 195.22 + 5.09 \times T$$

Table 10. Weighted average actual price, price index, and deflated price for an average and quality stand of timber in Indiana, 1957 to 1995.

Year	Producer Price Index	Average Stand			Quality Stand		
		Nominal Price	Index Number	Real Price <sup>1</sup>	Nominal Price	Index Number	Real Price <sup>1</sup>
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
		(\$/MBF)		(\$/MBF)	(\$/MBF)		(\$/MBF)
1957	32.5	55.6	100.0	171.0	66.5	100.0	204.7
1958	33.2	54.3	97.7	163.6	66.1	99.4	199.2
1959	33.1	54.7	98.4	165.2	68.1	102.4	205.7
1960	33.4	58.0	104.4	173.6	69.9	105.1	209.3
1961	33.4	59.5	107.1	178.1	70.4	105.9	210.9
1962	33.5	59.8	107.6	178.4	72.9	109.5	217.5
1963	33.4	59.4	107.0	177.9	75.3	113.1	225.3
1964	33.5	60.9	109.6	181.7	75.1	112.9	224.2
1965	34.1	65.0	117.0	190.7	80.6	121.1	236.3
1966	35.2	69.7	125.5	198.1	88.0	132.2	249.9
1967	35.6	71.9	129.4	202.0	89.0	133.7	249.9
1968	36.6	76.5	137.6	208.9	97.6	146.6	266.6
1969	38.0	78.7	141.6	207.1	100.0	150.3	263.1
1970	39.3	84.1	151.4	214.0	105.5	158.5	268.4
1971	40.5	87.0	156.6	214.8	109.5	164.5	270.3
1972	41.8	89.8	161.7	214.9	112.8	169.6	269.9
1973	45.6	113.5	204.3	249.0	143.7	215.9	315.1
1974	52.6	135.1	243.2	256.8	175.9	264.4	334.4
1975	58.2	124.9	224.9	214.7	169.9	255.4	292.0
1976	60.8	133.5	240.2	219.5	177.6	266.9	292.1
1977	64.7	143.5	258.2	221.8	194.7	292.7	300.9
1978	69.8	181.7	327.1	260.4	247.6	372.1	354.7
1979	77.6	200.1	360.2	257.9	276.7	415.9	356.5
1980	88.0	208.8	375.8	237.3	326.7	491.0	371.2
1981	96.1	206.6	371.9	215.0	300.2	451.2	312.3
1982	100.0	201.5	362.6	201.5	293.3	440.9	293.3
1983	101.6	201.0	361.8	197.8	278.3	418.3	273.9
1984	103.7	233.6	420.4	225.3	336.7	506.1	324.7
1985	104.7	210.4	378.8	201.0	290.3	436.4	277.3
1986	103.2	224.1	403.4	217.2	331.6	498.4	321.3
1987	105.4	258.0	464.3	244.7	358.4	538.7	340.0
1988	108.0	262.7	472.8	243.2	366.5	550.9	339.4
1989	113.6	288.8	519.9	254.3	445.0	668.9	391.7
1990	119.2	290.5	522.9	243.7	433.4	651.4	363.6
1991	121.7	270.1	486.2	222.0	395.5	594.4	325.0
1992	123.2	295.1	531.2	239.5	454.9	683.7	369.2
1993	124.7	357.1	642.7	286.4	537.8	808.3	431.2
1994	126.2	367.6	661.6	291.3	563.1	846.5	446.2
1995	127.6	354.9	638.7	278.1	490.1	736.7	384.1

<sup>1</sup> Actual price deflated by Producer Price Index for Finished Goods, U.S. Dept. Commerce, 1982 base year.

## IMPLICATIONS

It's dangerous to generalize about current market conditions for timber owners considering selling stumpage. Recall that prices for the premium species were up as of May, although lumber prices for the oaks were softening in June. As always, it's necessary to check current market conditions. The rate of economic growth increased in the second quarter. There are few signs of concern about a major slowdown. Thus, it appears very safe to enter the market with good timber.

The picture is different for stands of non-premium species. Stumpage not heavy to oak will be harder than usual to sell. However, buyers can still be found. It will be necessary to approach those specializing in industrial wood products, such as pallets. Although special markets such as the pallet market can utilize shorter length or lower grade lumber for their end products, they still may rely on retrieving grade lumber to enhance profits.

The market price for non-premium species is truly a 'point in time' assessment. As we have readily observed over the last twenty years, many non-premium species do come into vogue, albeit usually briefly and in limited volumes. Black ash, Cottonwood, and Sweet gum are but a few examples of species generally categorized as non-premium. Yet these species and others occasionally find their way into specialty 'niche' markets offering significantly greater returns to the forestland owner. Quality still remains paramount even in stands composed of lesser demand species.

Marketing stumpage of non-premium species often demands the same format used in marketing high value, preferred species. Niche markets tend to be 'thin markets' allowing for only a few sellers to capitalize on the potential profits. Advertising your stumpage offering through a timber sale summary flyer is an excellent mechanism to reach potential niche buyers. Your professional forester should be your first step in advertising your offering. This allows competition within the marketplace to set your stumpage prices.

Obviously investment decisions aren't made on the basis the change in prices over a two year period. The trend lines for the average and quality stands are still very favorable in terms of the real purchasing power of capital tied-up in hardwood timber growing stock. It remains prudent to manage for species diversity but favor oaks and other premium species. Timber stand improvement remains the best investment in terms of getting a return on stands currently owned. If you're not working with a professional forester to manage you stands, please explore what's possible with your district (state employee) forester, or consulting, or industrial forester in your area. The potential payoff from growing quality hardwoods is higher than most of us ever expected twenty years ago.

Figure 1. Ash lumber prices, monthly, 1974 to June 1995, 4/4 Appalachian, Hardwood Market Report, Memphis, Tenn.

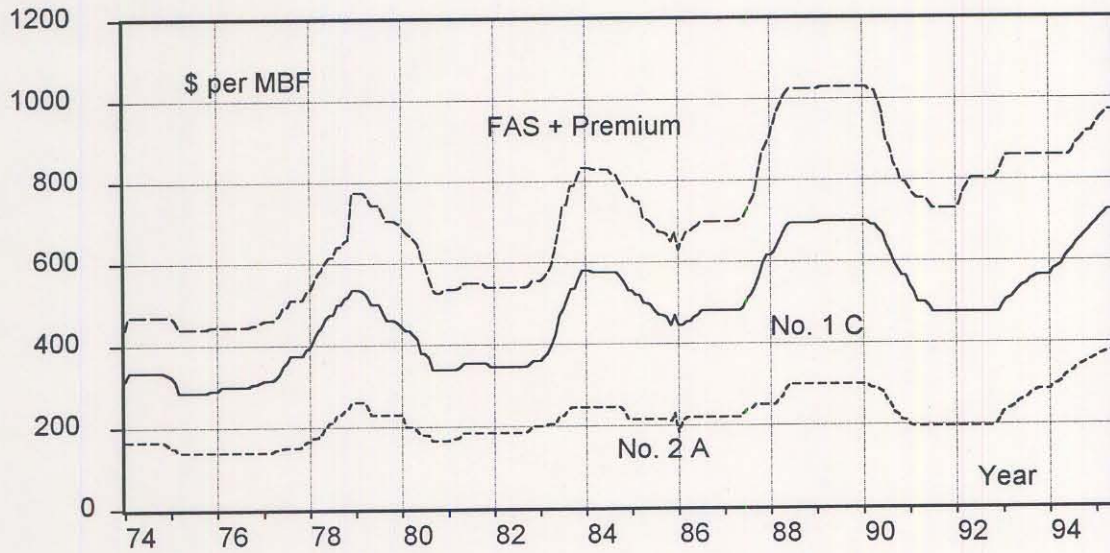


Figure 2. Basswood lumber prices, monthly, 1974 to June 1995, 4/4 Appalachian, Hardwood Market Report, Memphis, Tenn.

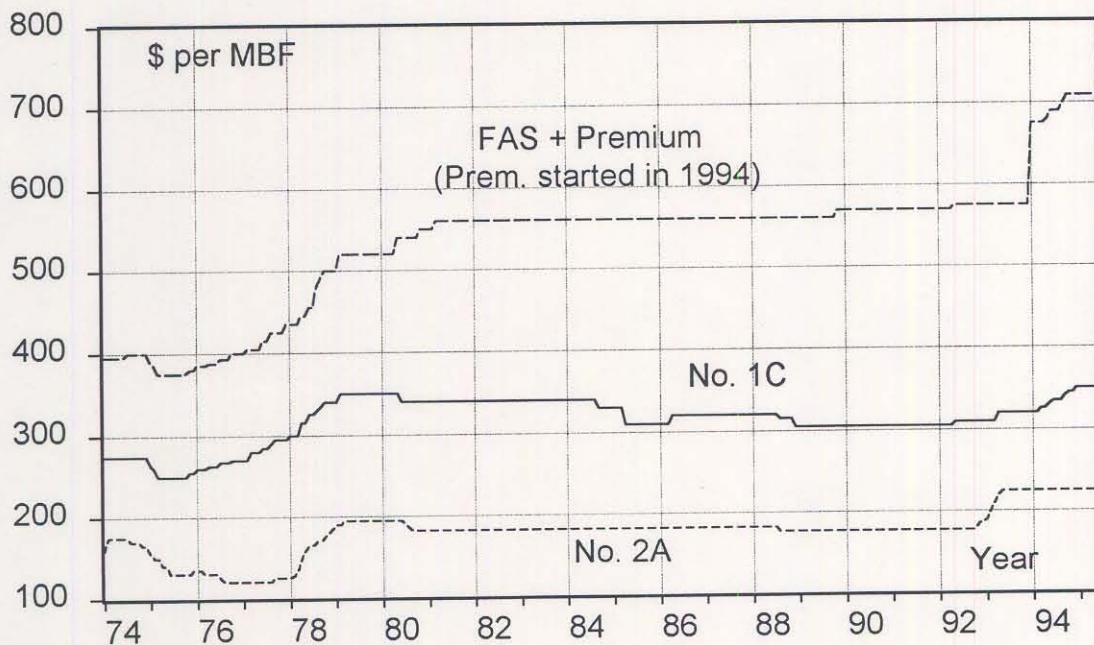


Figure 3. Beech lumber prices, monthly, 1974 to June 1995, 4/4 Appalachian, Hardwood Market Report, Memphis, Tenn.

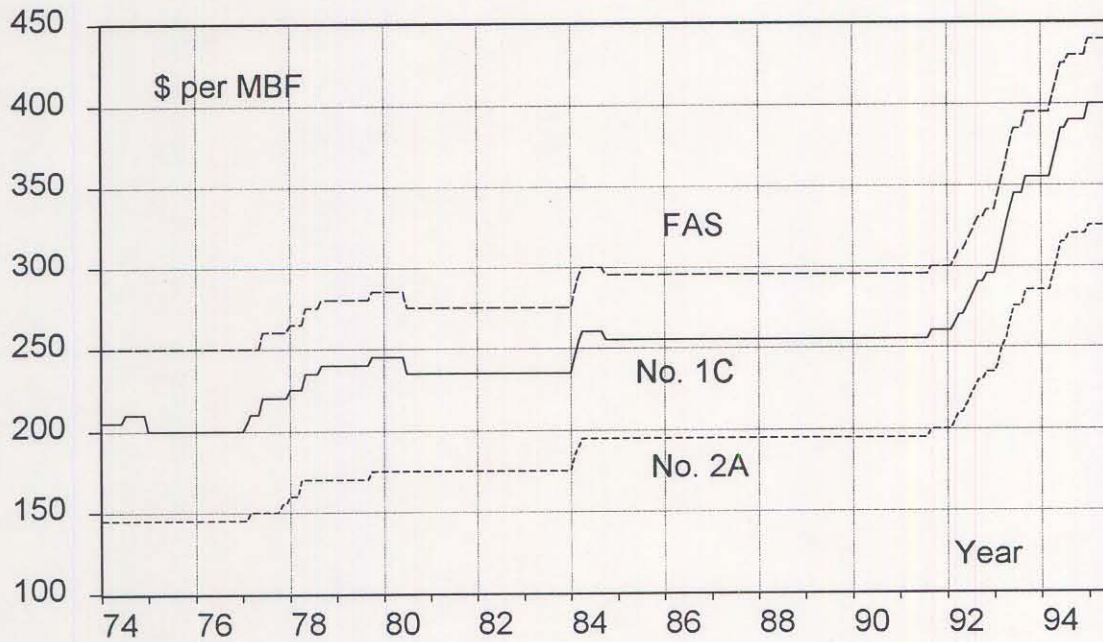


Figure 4. Cottonwood Lumber prices, monthly, 1974 to June 1995, 4/4 Southern, Hardwood Market Report, Memphis, Tenn.

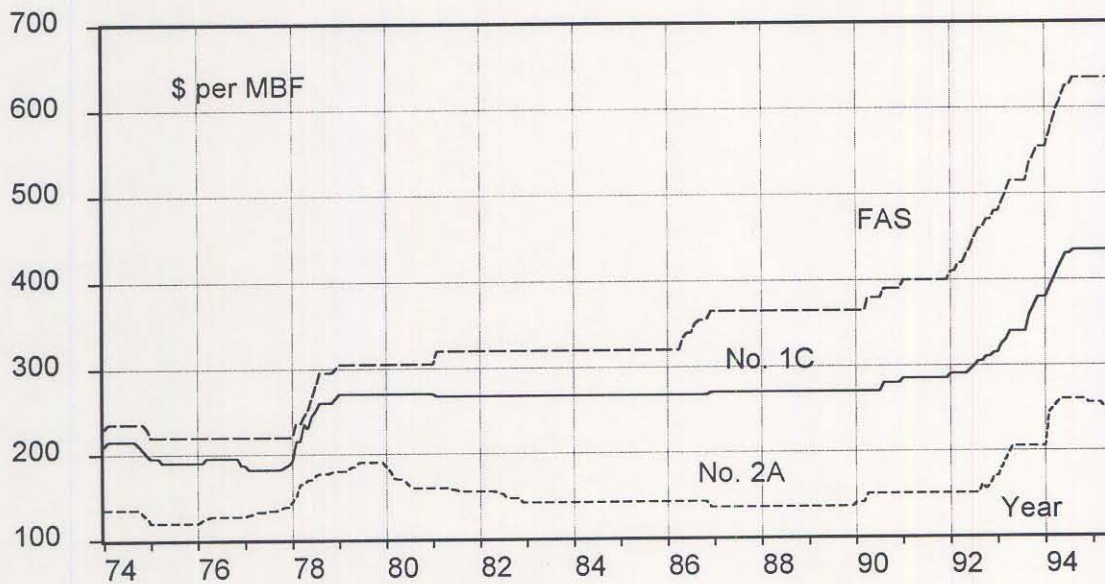


Figure 5. Black cherry lumber prices, monthly, 1974 to June 1995, 4/4 Applachian, Hardwood Market Report, Memphis, Tenn.

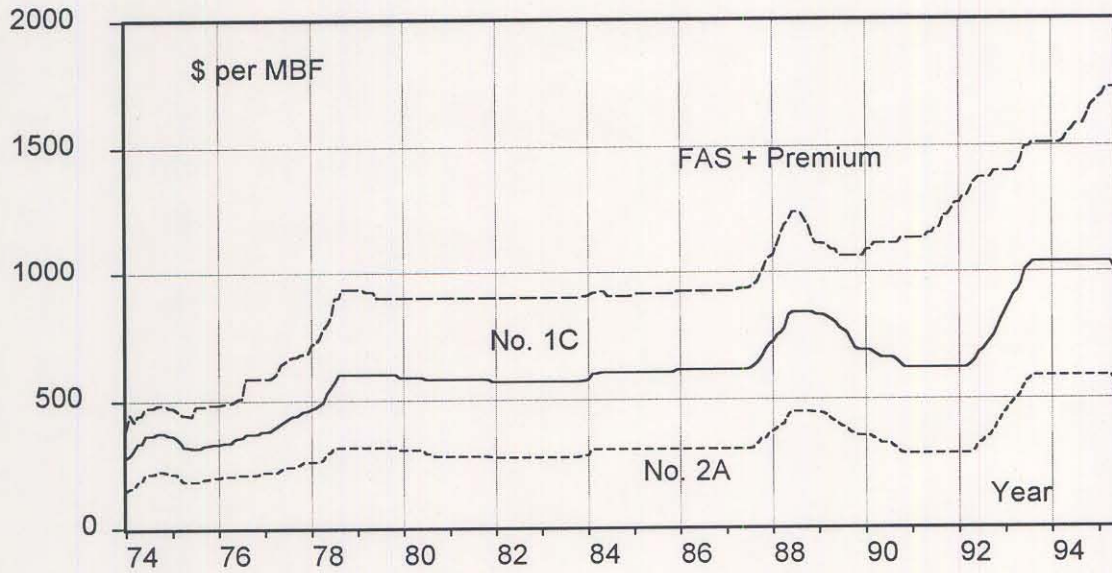


Figure 6 Elm lumber prices, monthly, 1974 to 1995, 4/4 Southern, Hardwood Market Report, Memphis, Tenn.

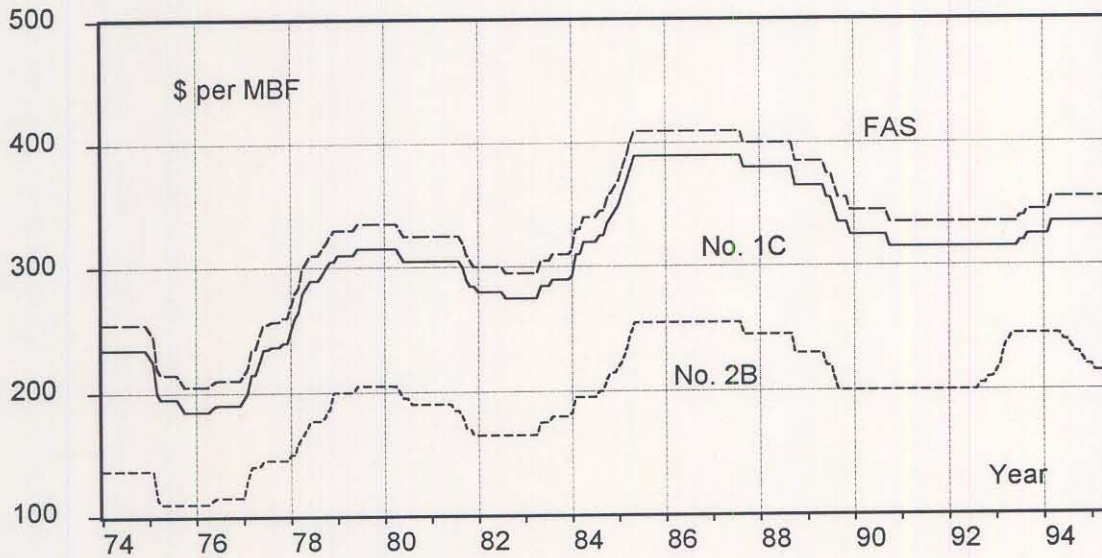




Figure 7. Hickory lumber prices, monthly, 1974 to June 1995, 4/4 Applachian, Hardwood Market Report, Memphis, Tenn.

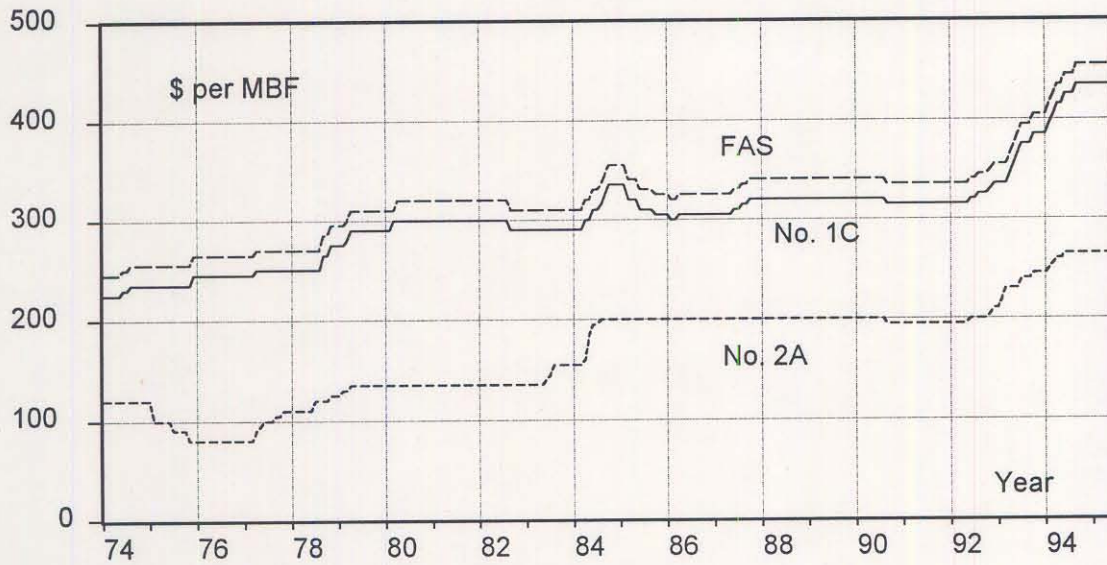


Figure 8. Hard maple lumber prices, monthly, 1974 to June 1995, 4/4 Applachian, Hardwood Market Report, Memphis, Tenn.

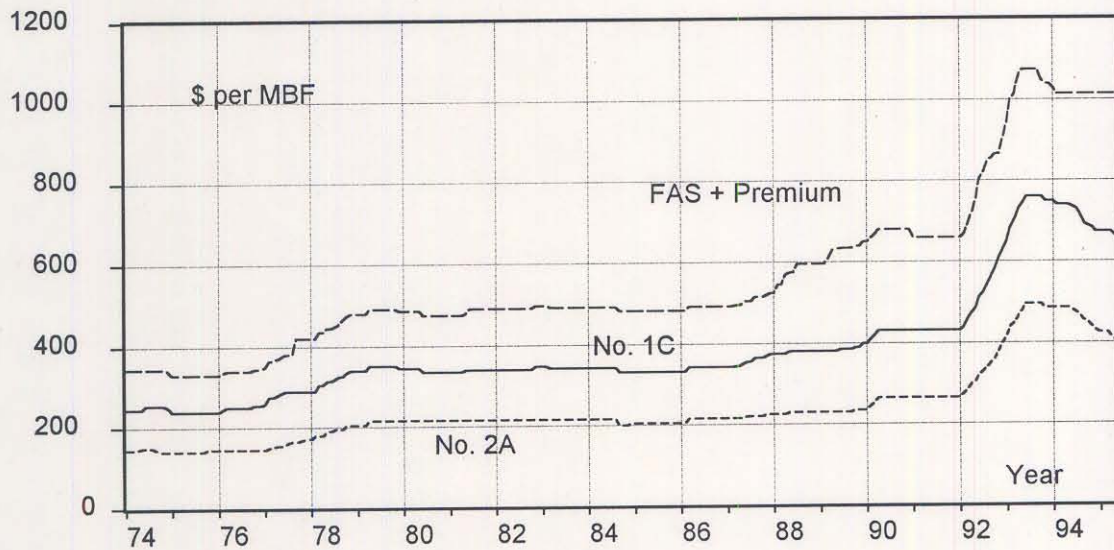


Figure 9. Soft maple lumber prices, monthly, 1974 to June 1995, 4/4 Appalachian, Hardwood Market Report, Memphis, Tenn.

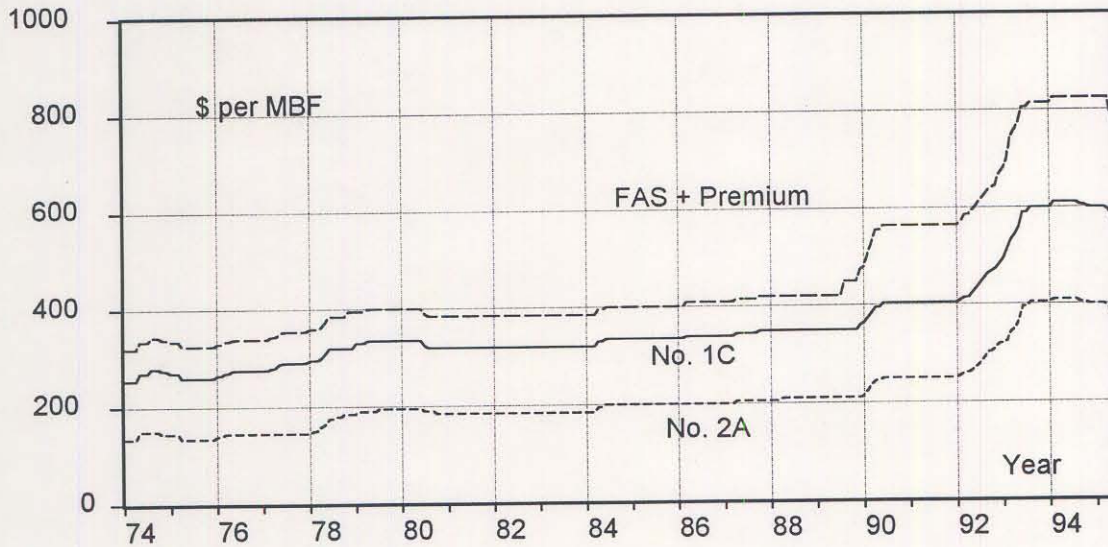


Figure 10. White oak lumber prices, monthly, 1974 to June 1995, 4/4 Appalachian, Hardwood Market Report, Memphis, Tenn.

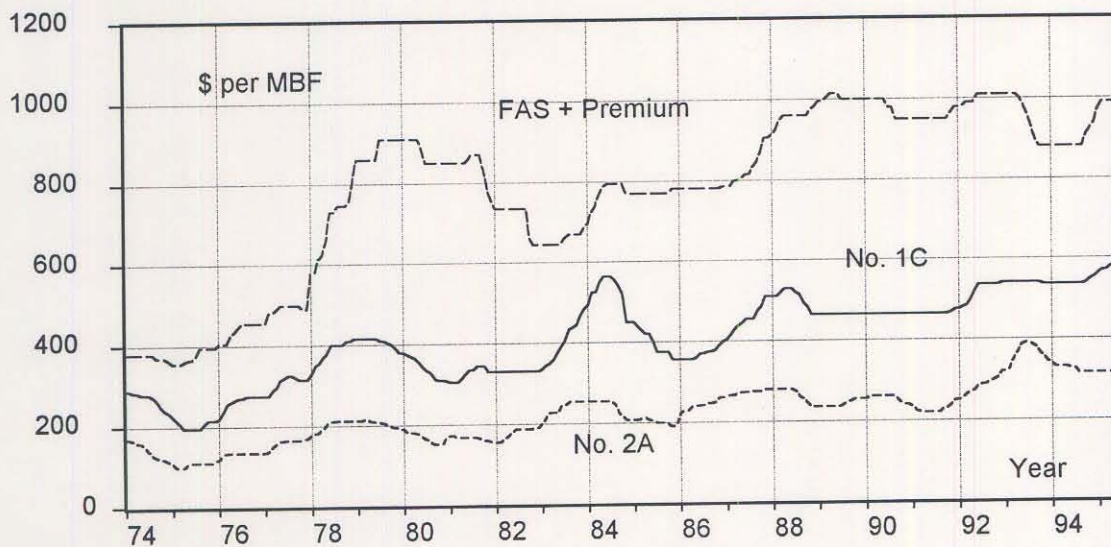


Figure 11. Red oak lumber prices, monthly, 1974 to June 1995, 4/4 Applachian, Hardwood Market Report, Memphis, Tenn.

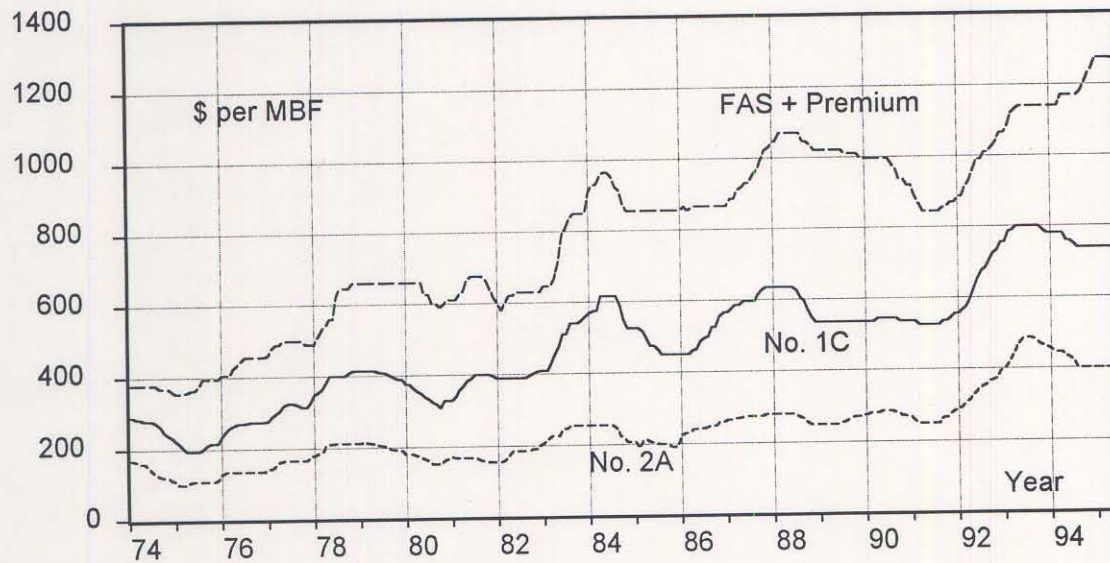


Figure 12. Tulip poplar lumber prices, monthly, 1974 to June 1995, 4/4 Applachian, Hardwood Market Report, Memphis, Tenn.

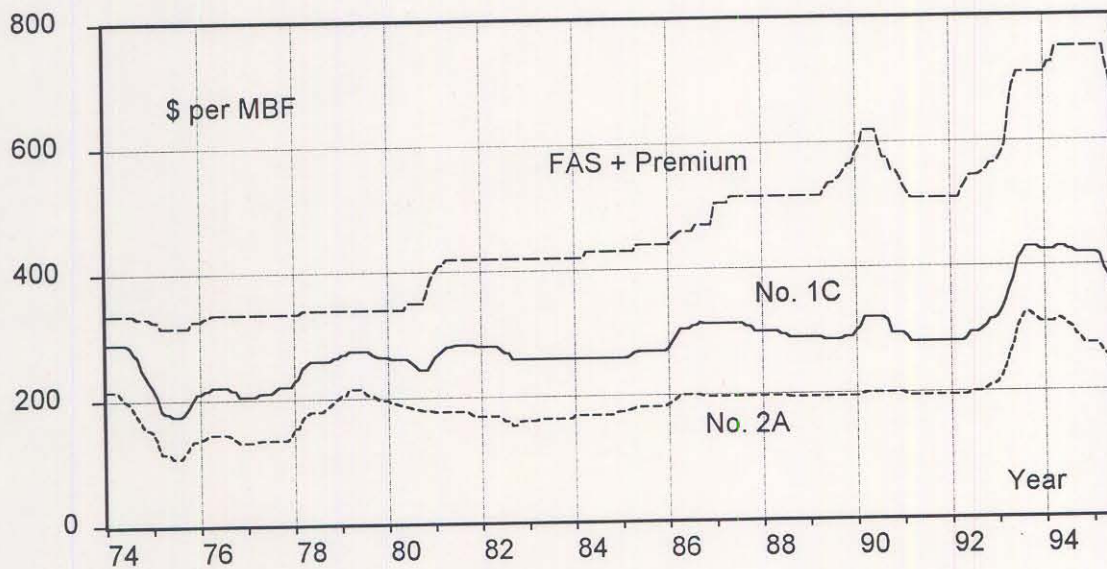


Figure 13. Sycamore lumber prices, monthly, 1974 to June 1995, 4/4 Applachian, Hardwood Market Report, Memphis, Tenn.

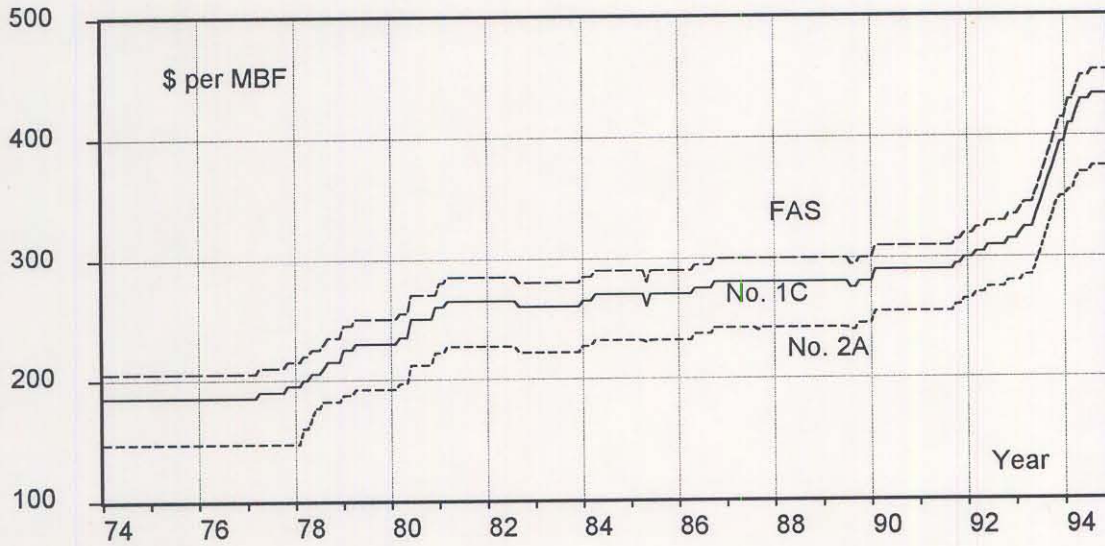


Figure 14. Black walnut lumber prices, monthly, 1974 to June 1995, 4/4 Applachian, Hardwood Market Report, Memphis, Tenn.

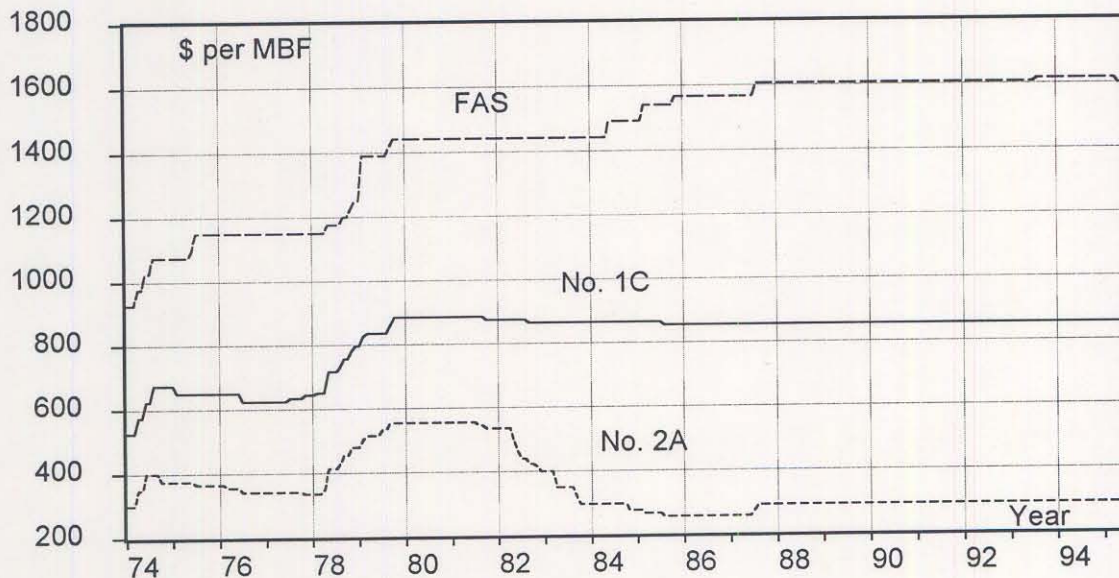


Figure 15. Producer price index for finished goods, U.S. Dept. Commerce, 1957 to 1995 (as of April).

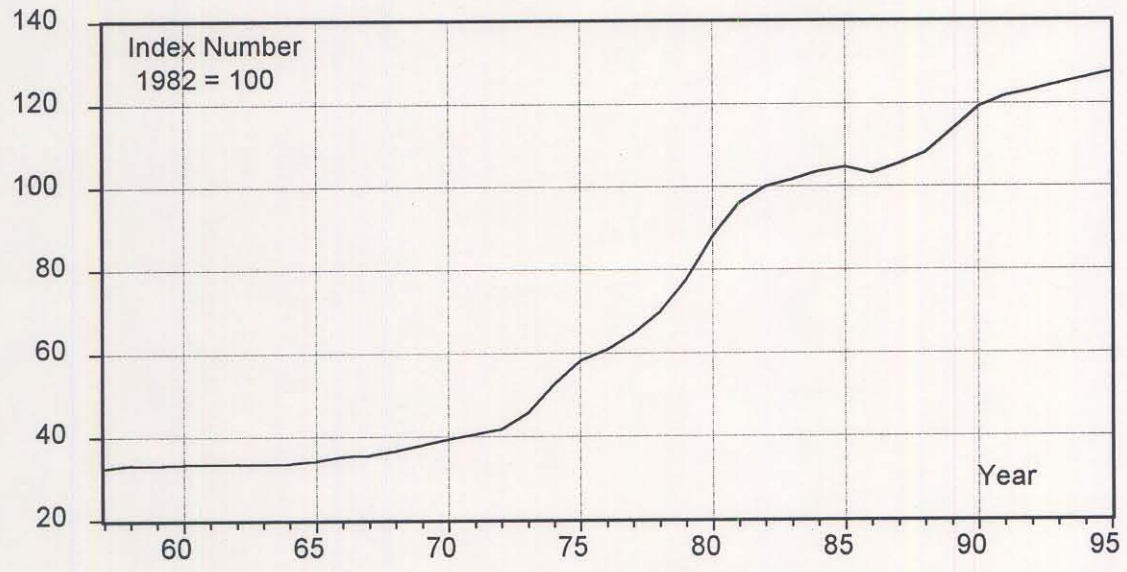


Figure 16. Average stand, nominal, real, and trend line price, 1957 to 1995.

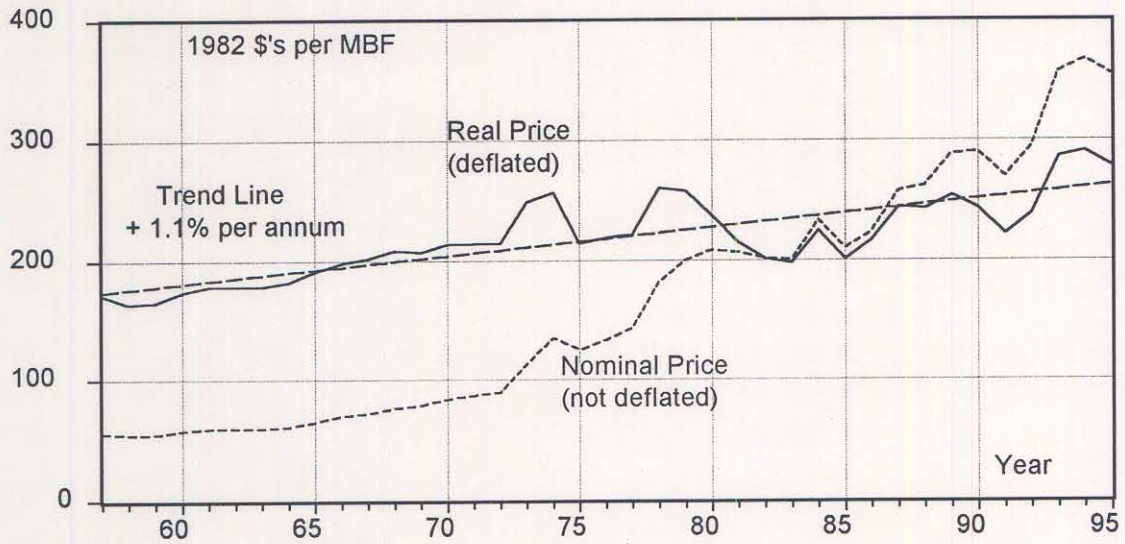


Figure 17. Quality stand, nominal, real, and trend line price, 1957 to 1995.

