

**Department of Forestry** 

**MTN - 23C** 

## February 2010

## 2009 Harvest of Forest Products<sup>1</sup> Forest Economics

The Mississippi forest industry harvested and delivered \$864.9 million worth of forest products to mills and other processors over the course of 2009. The forest industry in Mississippi and the harvest volumes in this report include all producers and harvesters of forest products paying a severance tax collected by the Mississippi Tax Commission. The total estimated value of the 2009 Mississippi timber harvest delivered to the point of first processing (such as a pulpwood yard or sawmill) was \$864,916,113. The estimated volume and value of the 2009 timber harvest by product is presented in Table 1. The 2009 harvest value is 19.9% lower than the 2008 value (See Table 2). This sharp reduction in harvest value is mostly attributable to declines pine sawlog production (See Table 2). A comparison of 2009 and 2008 Mississippi timber product prices is presented in Table 3.

This was the first year the harvest value fell below the \$1 billion dollar level since 1992. The 2009 harvest value of \$864.9 million follows a consecutive 16 years where Mississippi's timber production was valued in excess of \$1 billion. However, timber remained the second most valuable agricultural commodity in 2009. The top three product categories for Mississippi remained the same as last year; poultry and eggs ranked first at \$2.3 billion, timber second at \$864.9 million, and soybeans third at \$432 million.

Mississippi's forest landowners collected \$425 million for their standing timber in 2009, a decrease of 26.1% from the previous year. The estimated value of the harvesting and transportation sector<sup>2</sup>, which is the difference between the delivered and standing values, decreased 12.9% from the previous year to \$438.4 million. However, the value of the harvesting and transportation sector as a percentage of the total harvest value increased 8.8%. In 2008, harvesting and transportation accounted for 46.6% of the total harvest value, and in 2009, this increased to 50.7%.

Severance tax collections on forest products were \$2,811,155 in 2009, which is 14.9% lower than 2008 collections. Twenty percent of severance tax collections, or about \$562,531, were returned to counties where the timber was harvested. Eighty percent, or about \$2,248,624, went to the Forest Resource Development Program (FRDP) to provide cost share funds to nonindustrial private forest landowners for reforestation and other forest management practices.

<sup>&</sup>lt;sup>1</sup> By James E. Henderson, Assistant Extension Professor.

<sup>&</sup>lt;sup>2</sup> This sector includes logging firms, contractual services, contractual trucking, timber buyers, and wood dealers.

A comparison between 2008 and 2009 harvest volumes and delivered values by product category is presented in Table 2. The harvest volume of pine sawlogs decreased by 28.1%, and its value declined 31.4%. Pine pulpwood volume fell by 0.4% while the value decreased 2.6%. The volume of pine poles decreased 17.4% while their value decreased 25.2%. Hardwood sawlog volume decreased 19.7%, and its value fell by 19.6%. Hardwood pulpwood volumes declined 19.1%, and its value decreased by 19.5%. Christmas tree harvests declined 18.4% from the previous year and value fell by 11.8%.

The primary factors impacting Mississippi's timber markets during 2009 continued to be the heavily contracted housing sector and the recent economic recession. According to the U.S. Census Bureau, 2009 residential construction spending, which includes home improvement, multifamily construction, and single-family construction, fell to just over \$253.7 billion. That represents a decline of 58.8% from 2006 residential construction spending of \$616.7 billion during the peak of the housing bubble. As a result, demand for lumber products declined throughout 2009. Lumber production for 2009 in the U.S. South fell 23.7% through November as compared with the same period for 2008, according to the Western Wood Products Association. Reflecting this decreased demand, the 2009 Mississippi average delivered prices for pine sawtimber decreased by 4.4% from the previous year with volume and value down by 28.1% and 31.4%, respectively.

The estimated value of the harvesting and transportation sector accounted for 50.7% of the total harvest value in 2009, an 8.8% increase over the previous year. This relative increase in harvesting and transportation cost and decrease in standing value as a proportion of the total harvest reflects lower stumpage rates and increased hauling distances for some forest products. For example, the average 2009 price for pine sawtimber as compared to 2008 fell 4.4% for delivered and 10.7% for standing (See Table 3). Four pine sawmills closed in Mississippi over the course of 2009. Fewer mills translate into greater hauling distances for forest products, and fewer buyers reduce competition for timber, resulting in lower timber bid offers and lower standing prices. With many mills and logging firms operating near or below break-even levels during these exceptionally difficult times, a greater share of costs associated with transportation were absorbed by landowners during 2009 as compared with previous years. Typically, fuel costs are responsible for increases in harvesting and transportation cost; however, the U.S. South-wide annual average price for diesel fuel decreased 35.6% in 2009 over the previous year (2008 diesel prices were exceptionally high). Thus, the relative decrease in standing value and increase in harvest and transportation value is a reflection of the forest product sector and the harvesting and transportation sector operating at or below breakeven points and costs associated with harvesting and transportation being absorbed in greater proportion by landowner payments.

Pulpwood demand improved over the course of 2009. Recall that 4<sup>th</sup> quarter 2008 pulpwood demand fell sharply as demand for paper products fell during the recent economic recession. However, recent improvements during the latter half of 2009 were a result of gradual improvement in the overall economy, reduced harvestable pulpwood volumes, and a recent tax credit popularly referred to as the black liquor tax credit. Black liquor is a byproduct of chemical pulping of wood fiber and paper mills use black liquor as an energy source. This federal tax credit designed to encourage the use of liquid alternative fuel prompted paper companies to

increase consumption of wood fiber rather than recycled fiber. Given the reduced availability of woodchips from sawmills, paper companies increased pulpwood consumption throughout 2009. This tax credit expired December 2009.

The past three years were an exceptionally difficult period for the forestry and forest products industry; however, the primary forces driving Mississippi's timber markets appear to be improving. The national economy and the housing sector began to stabilize during the second half of 2009. The U.S. economy grew at annual rate of 5.7% in the fourth quarter of 2009 which is the fastest pace of increase in more than six years. Following an upward trend since mid-2009, U.S. housing starts ended the year at a seasonally annually adjusted rate of 557,000 units.

The first time home buyer tax credit apparently has helped stabilize the housing market, resulting in reduced inventories of both new and existing homes. The tax credit was set to expire in November 2009 but was extended to April 2010 and expanded to include existing home owners. Given the apparent success of the first-time home buyer tax credit, the expanded tax credit should help further increase new home construction. Also, mortgage rates remain at historically low levels, and the housing affordability index remains high.

U.S housing starts are expected to reach an annual rate of 1million units by 2011. There are a number of factors expected to help bolster new home construction such as historically low home mortgage rates and the home buyer tax credit. Also, homeowner improvement spending is expected to bottom during the first quarter of 2010 and then modestly increase. These expectations are based on a rise in existing home sales and stabilization in existing home prices. Given these expected improvements in the housing sector, demand for wood products should increase gradually over 2010 with noticeable improvement during 2011.

Harvested volumes by product and by country obtained from the Mississippi State Tax Commission are presented in Table 4. For information on current Mississippi timber prices, consult the Mississippi Timber Price Report available on-line at www.msucares.com. Select "Forestry" then "Timber Prices." For more information on timber marketing, harvesting, or prices, contact your local County Extension Service or the Mississippi State University Department of Forestry, Box 9681, Mississippi State, MS 39762. Table 1. Estimated volumes and values of the 2009 timber harvest.

Product/Unit <sup>1</sup>	Volume	Standing <sup>2</sup> Value(\$)	Delivered <sup>2</sup> Value(\$)
Pine Sawlogs, MBF, D	845,665	203,302,168	326,232,779
Hardwood Sawlogs <sup>3</sup> , MBF, D	256,399	71,422,079	114,314,644
Pine Pulpwood, Cords	4,265,196	103,125,297	305,871,487
Hardwood Pulpwood, Cords	1,295,176	35,387,218	100,373,580
Poles, MBF, D	26,108	11,008,900	15,206,143
Crossties <sup>4</sup> , MBF, D	3,375	758,679	1,307,695
Stumpwood <sup>5</sup> , Tons	4,273	25,012	109,785
Christmas Trees <sup>6</sup> , Tree	40,000	**	1,500,000
Total Value		425,029,353	864.916.113

<sup>1</sup> Unit abbreviations: MBF = thousand board feet, and D = Doyle log rule.

<sup>2</sup> Standing and delivered values calculated using regional (north and south Mississippi) volumes reported by the Miscellaneous Tax Division of the Mississippi Tax Commission and product prices from sources such as Timber Mart-South.

<sup>3</sup>Composite price for hardwood sawlogs calculated under the assumption that hardwood sawmills cut 70% oak and 30% mixed hardwood.

<sup>4</sup> Crosstie values calculated using standing and delivered values for mixed hardwood sawtimber prices by region. <sup>5</sup> Stumpwood values calculated using pine pulpwood prices.

<sup>6</sup>Christmas trees value and volumes estimated by Mississippi State University Extension Forester Stephen Dicke. \*\* Not reported since most trees are sold as choose-n-cut.

		2008				
Product/Unit <sup>1</sup>	Volume	Value	Volume	% Change	Value	% Change
		-Dollars-			-Dollars-	
Pine Sawlogs, MBF, D	1,175,476	475,750,884	845,665	-28.1%	326,232,779	-31.4%
Hardwood Sawlogs, MBF,D	319,388	142,257,158	256,399	-19.7%	114,314,644	-19.6%
Pine Pulpwood, Cords	4,282,399	314,016,884	4,265,196	-0.4%	305,871,487	-2.6%
Hardwood Pulpwood, Cords	1,600,100	124,630,939	1,295,176	-19.1%	100,373,580	-19.5%
Poles, MBF,D	31,599	20,324,120	26,108	-17.4%	15,206,143	-25.2%
Crossties, MBF,D	3,097	1,243,176	3,375	9.0%	1,307,695	5.2%
Stumpwood, Tons	2,426	68,052	4,273	76.1%	109,785	61.3%
Christmas Trees, Tree	49,000	1,700,000	40,000	-18.4%	1,500,000	-11.8%
Total Value		1,079,991,214			864,916,113	-19.9%

Table 2. Comparison of 2008 and 2009 harvest volumes and delivered values by product.

<sup>1</sup> Unit abbreviations: MBF = thousand board feet, and D = Doyle log rule.

			Standin	g Prices		Delivered Prices			
		Statewide Average					Statewide Average		
Product / Unit <sup>2</sup>	Region	Average	2009	2008	% Change	Average	2009	2008	% Change
Pine Pulpwood, Cords	North South	21.57 25.48	23.52	24.59	-4.4%	71.73 67.85	69.79	74.26	-6.0%
Hardwood Pulpwood, Cords	North South	29.76 25.20	27.48	21.76	26.3%	78.54 76.60	77.57	78.10	-0.7%
Pine Sawtimber, MBF,D	North South	235.75 243.25	239.50	268.13	-10.7%	389.00 384.00	386.50	404.38	-4.4%
Mixed Hardwood Sawtimber, MBF,D	North South	225.00 212.75	218.88	256.13	-14.5%	387.50 387.75	387.63	408.75	-5.2%
Oak Sawtimber, MBF,D	North South	273.50 319.00	296.25	317.88	-6.8%	452.00 481.50	466.75	459.75	1.5%
Pine Poles, MBF,D	North South	429.00 417.50	423.25	443.88	-4.6%	593.75 576.00	584.88	673.08	-13.1%
Pine Pulp, Ton	North South	8.35 9.36	8.85	9.17	-3.4%	26.79 25.32	26.06	27.71	-6.0%
Oak Pulp, Ton	North South	10.26 8.69	9.48	7.50	26.3%	27.09 26.41	26.75	26.93	-0.7%

Table 3. Comparison of 2009 and 2008 Mississippi Major Product Prices<sup>1</sup>.

<sup>1</sup> Data source: Timber Mart-South. <sup>2</sup> Unit abbreviations: MBF = thousand board feet, and D = Doyle log rule.

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		HARD-		HARD-		HARD-					HARD-
	PINE	WOOD	PINE	WOOD	PINE	WOOD	PINE	STUMP		PINE	WOOD
	LUMBER	LUMBER	SAWLOGS	SAWLOGS	PULPWOOD	PULPWOOD	POLES	WOOD	CROSSTIES	LOGS	LOGS
COUNTY	MBF	MBF	MBF,D	MBF,D	CORDS	CORDS	C CU FT	TONS	MBF,D	TONS	TONS
NORTHERN REGION											
ALCORN		32.00	2,554.00	611.87	23,903.60	9,114.53	0.63				
ATTALA			21,636.92	2,081.33	113,706.80	25,513.16	11.91			42.21	1
BENTON			2,892.00	1,211.37	14,042.03	5,053.33	0.08				170.67
BOLIVAR			688.83	2,235.87	1,200.03	14,625.91					
CALHOUN			27,731.00	242.56	60,791.70	6,763.33	2.50				
CARROLL			2,234.53	1,073.33	31,749.90	20,108.09	0.77		1.33		
CHICKASAW	5.33		8,506.27	654.67	17,078.00	5,920.93					18.67
CHOCTAW	14.67		20,022.10	985.33	75,271.57	31,634.00	18.99				
CLAY			7,127.83	480.00	20,457.77	12,382.53	0.95	36.00	8.00	3.55	
СОАНОМА	60.00		108.00	3,014.93	45.97	8,830.27					
DESOTO			16.00	709.33	2,258.07	942.22					
GRENADA			1,771.00	450.67	17,939.53	3,631.42	2.91				
HOLMES			3,533.73	3,944.00	37,601.77	38,424.04					
HUMPHREYS					19.77	1,555.56					
ISSAQUEENA			4.00	4,123.73	33.33	17,536.44					
ITAWAMBA			20,353.00	5,301.33	25,800.00	36,383.47	3.46			1,481.33	1,613.33
KEMPER			29,122.77	1.101.33	133.721.63	45,473.96	47.08			146.25	
LAFAYETTE			12.291.00	702.67	44.066.87	3.412.44	0.41				20.00
LEAKE			10.384.04	1.364.00	91.651.40	13.096.89	3.00				
LEE			3.491.00	1.354.67	4.232.77	3,040,00	0.32				272.00
LEFLORE			7.00	578.67	53.30	4.950.22					
LOWNDES			2.414.52	180.00	11.283.20	17.749.96	0.23		1,173,33	13.36	
MADISON			4.256.83	1.501.33	70,567.70	12,716.98	0.51		,	36.52	
MARSHALL			3.714.00	2.089.33	17.922.83	10,908,89	0.06				193.33
MONROE			20.416.38	1.818.67	10.423.03	22.323.20	14.15			117.76	540.00
MONTGOMERY			8.451.87	240.00	34.723.23	7,797,51	8.22		1.33	54.21	
NESHOBA			8.535.67	1.734.67	61.954.13	26.255.78	5.61			96.91	
NOXUBEE			15.313.48	972.00	73.854.20	15.609.20	11.81			168.37	
OKTIBBEHA			4 884 74	430.67	32,493,43	11,798.00	7.82		2.057.33	8.25	
PANOLA		6.67	1,117,00	2.236.00	17,165,13	10,157,56	7.02		2,007.00	2.810.67	
PONTOTOC		17.33	8.510.00	913.69	10.370.40	2.699.96	0.06			_,010101	176.00
PRENTISS		1.00	7,467,00	1.824.00	17,983,33	16,964,44	0.13	1.040.00	56.00		81.33
OUITMAN			12.00	102.67	11,900.00	31.11	0.10	1,010.00	20100		01.00
SHARKEY			229.04	340.00	5,399,93	3,385,11				28.57	
SUNFLOWER				466.67	0,00000	795 56				20107	
TALLAHATCHIE			59.00	718 67	2 708 43	5 851 56		12.88			
TATE			69.00	1 220 00	2,700.43	2 460 98		12.00			
ТІРРАН			2,966,00	1 306 28	50 996 67	17 818 27	1 27				162.67
TISHOMINCO			4 918 02	1,000.20	63 646 67	28 044 44	0.26		13 33		32.00
TINICA			4,918.02	1,940.12 518.67	03,040.07	20,044.44	0.20		13.33		/1 33
UNION			4 155 00	1 202 56	23 600 00	10 702 22	0.50				41.55
WASHINGTON			30.00	1,272.30	23,000.00	6 715 07	0.50				-100.00
WERSTED			27 026 25	357 22	55 635 27	8 012 90	11.29		13 22	1 11	
WINSTON			0 716 07	1 744 00	80 670 50	31 764 40	15 31		15.55	4.41 29.01	
VALORISHA			5 305 15	1,/44.00	20 544 42	10 120 21	15.51			30.71	5 32
VA700			2,393.15	5 784 00	27,344.43	12 / 12/ 12	1.00				5.55
NODTHEDN TOTAT	80.00	56.00	210.39	64 670 65	1 /13 /2/ 02	602.068.62	171.02	1 066 60	3 224 00	5 051 20	3 724 67
INOVINEVIA IOTAL	00.00	30.00	514,414.33	04,072.05	1,413,434.03	002,200.02	1/1.74	1,000.00	3,344.00	5,051.29	3,134.07

Table 4. Mississippi's 2009 harvested timber volumes by product and county.

	<u> </u>	• >									
		HARD-		HARD-		HARD-					HARD-
	PINE	WOOD	PINE	WOOD	PINE	WOOD	PINE	STUMP		PINE	WOOD
	LUMBER	LUMBER	SAWLOGS	SAWLOGS	PULPWOOD	PULPWOOD	POLES	WOOD	CROSSTIES	LOGS	LOGS
COUNTY	MBF	MBF	MBF,D	MBF,D	CORDS	CORDS	C CU FT	TONS	MBF,D	TONS	TONS
SOUTHERN REGION											
ADAMS		1936.000	2,024.00	10,393.33	11,308.07	27,938.67					
AMITE	68.000	1642.667	37,147.93	20,562.51	155,915.47	41,894.40	33.05			36.28	
CLAIBORNE			10,414.49	12,070.13	62,661.77	41,835.82	5.76				
CLARKE			29,365.47	4,306.67	89,365.53	23,373.82	80.81		5.33	2,984.75	236.00
COPIAH		37.333	43,992.15	7,724.00	129,914.50	45,302.98	17.58			202.09	48.00
COVINGTON			9,256.35	11,734.67	61,547.30	359.82	1.01			1,108.75	142.67
FORREST		4.213	5,413.42	1,192.00	39,948.27	7,128.22	1.74	3,184.00		106.25	41.33
FRANKLIN			19,333.67	6,040.00	93,133.47	22,417.07	12.17			135.19	
GEORGE			5,386.62	616.00	42,713.17	1,875.02	2.38				
GREENE			11,208.20	2,006.67	165,299.07	13,553.07	6.97			2,091.24	
HANCOCK		4.493	12,701.26	22.67	59,196.80	1,595.29	0.26				441.32
HARRISON		814.667	6,657.17	2.67	29,836.63	26.13	1.06			1,522.55	
HINDS			9,761.82	4,229.60	72,767.67	20,667.20	0.20			58.52	
JACKSON			1,953.90	28.00	35,292.13	822.31	0.38			40.16	
JASPER		9.000	23,436.15	8,458.93	104,258.47	21,457.87	11.10			4,494.87	622.67
JEFF DAVIS		10.587	17,683.76	1,493.33	77,013.43	8,717.73	2.58		2.67	1,403.17	
JEFFERSON			11,114.51	5,258.67	61,938.67	20,704.49	6.49			858.01	
JONES			13,945.43	14,138.67	104,371.97	1,486.00	10.30		34.67	443.35	
LAMAR	12.000	5.560	18,266.97	514.67	86,795.03	2,412.04	9.34		8.00	595.15	
LAUDERDALE	2.667		25,744.14	1,562.67	121,892.33	56,433.51	19.84			1,177.91	
LAWRENCE		8.573	33,159.68	1,932.00	92,052.40	16,132.80	1.41			1,240.13	
LINCOLN		46.667	17,951.57	2,082.67	131,673.30	22,136.89	13.33			78.53	
MARION	225.333		19,138.07	2,328.00	112,386.03	28,537.20	2.35			935.76	125.33
NEWTON		11.880	15,930.98	2,990.01	53,992.60	23,106.36	18.37			788.81	
PEARL RIVER		12.507	15,575.04	392.00	93,927.17	8,445.38	0.16			1,230.85	
PERRY			5,514.14	213.36	83,469.77	3,796.58	2.04			237.91	
PIKE		2.667	12,579.98	1,568.00	64,284.43	13,660.93	2.11			341.60	
RANKIN			17,879.64	5,666.67	106,446.63	9,648.18	14.35			573.99	190.67
SCOTT	18.667	17.267	8,786.91	2,570.67	67,908.30	56,455.07	0.44			241.29	194.67
SIMPSON		13.173	13,044.22	3,296.00	88,352.50	38,767.78	0.71			573.63	
SMITH		5.413	13,775.60	6,427.11	60,023.50	3,759.02	1.10			561.48	106.67
STONE			4,737.22	67.43	27,121.00	2,476.76	0.31			3.69	
WALTHALL		5.427	4,220.02	908.00	63,892.83	5,236.09	2.22			570.48	
WARREN			1,973.60	20,691.87	5,008.70	27,368.76					
WAYNE		45.333	23,904.03	7,937.69	98,390.43	32,632.80	13.66			196.96	154.53
WILKINSON		508.013	7,865.94	15,095.04	86,168.93	37,888.49	7.17				
SOUTHERN TOTAL	326.67	5,141.44	530,844.05	186,522.35	2,840,268.27	690,050.53	302.77	3,184.00	50.67	24,833.35	2,303.85
GRAND TOTAL	406.67	5,197.44	845,258.58	251,202.00	4,253,702.30	1,293,019.16	474.69	4,272.88	3,374.67	29,884.64	6,038.52

Table 4. Mississippi's 2009 harvested timber volumes by product and county (cont.).