

Arkansas, 2012

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This annual factsheet is a brief look at some of the basic metrics that describe the status and trends of forest resources in Arkansas. Estimates presented here are for the measurement year 2012 with resource changes compared against the 2011 survey year. Information for the factsheet is updated every year by means of the Forest Inventory and Analysis (FIA) annualized sample design.

Arkansas has about 5,700 sample plots across the State. Each year 20 percent of these plots (one panel) are visited and measured by field crews, the data compiled, and new estimates produced. It is important that users keep in mind that each year of new estimates, and the subsequent resource changes, are strongly influenced by the newest 20 percent of the sample; the older data comprise the remaining 80 percent of the sample. The 20-percent sample may result in some rather sharp spikes in estimates when comparing successive survey years. However, in most instances the annualized design should give a reasonable indication of directional trends in the resource such as increasing, decreasing, or no change. After 5 years of measurements, the full sample complement (a cycle) is complete and a new survey cycle begins. Because the 20-percent panel sample size is rather small, the strongest and most reliable trend information (especially that concerning magnitude of change) comes from comparing two full cycles of data.

FOREST INVENTORY & ANALYSIS FACTSHEET

The Arkansas 2012 factsheet is based on data processed and posted on the FIA database (FIADB) on June 14, 2013 (2012 data) and April 12, 2012 (2011 data) at <http://fia.fs.fed.us/tools-data/>. Definitions can be found in the FIADB user's manual at <http://fia.fs.fed.us/tools-data/docs/default.asp>. Additional information concerning definitions and descriptive statistics can be found in the resource bulletin "Arkansas' Forests, 2005" (RB-SRS-166) at <http://www.srs.fs.usda.gov/pubs/34894>.

This factsheet includes estimates of Arkansas forest land area (table 1), ownership (table 2), forest-type groups (table 3), volume (tables 4 and 5), biomass (tables 6 and 7), pine plantation area (table 8), species volumes (tables 9 and 10) as well as maps of forest survey units (fig. 1), and percent of county area in forest (fig. 2). The estimates are presented by survey units so users can assess resource attributes and change in the region of Arkansas in which they have the most interest.



Precommercial thinning in 3-year old loblolly pine plantation, thinned to 400 trees per acre, Lafayette County, Arkansas. (photo by Teddy Reynolds, Reynolds Forestry Consulting and Real Estate, PLLC)



Table 1—Area of forest land and change, by survey unit, Arkansas, 2011 and 2012

Survey unit	2011	2012	Change
<i>thousand acres</i>			
South Delta	1,408.4	1,445.1	36.7
North Delta	777.1	793.3	16.2
Southwest	6,819.9	6,870.9	51.0
Ouachita	3,367.4	3,407.7	40.3
Ozark	6,382.2	6,426.8	44.6
All units	18,754.9	18,943.7	188.8

Table 2—Area of forest land and change, by ownership class, Arkansas, 2011 and 2012

Ownership class	2011	2012	Change
<i>thousand acres</i>			
National forest	2,492.2	2,515.8	23.6
Other public	1,145.5	1,153.3	7.8
Forest industry	3,467.9	3,082.4	-385.5
NIPF	11,649.3	12,192.2	542.9
All classes	18,754.9	18,943.7	188.8

NIPF = nonindustrial private forest.

Table 3—Area of forest land and change, by forest-type group, Arkansas, 2011 and 2012

Forest-type group	2011	2012	Change
<i>thousand acres</i>			
Loblolly-shortleaf pine	5,563.5	5,668.0	104.5
Eastern red cedar	302.6	295.8	-6.8
Oak-pine	2,020.8	2,015.3	-5.5
Oak-hickory	7,759.5	7,891.6	132.1
Bottomland hardwoods	2,930.5	2,913.3	-17.2
Miscellaneous types	32.9	20.0	-12.9
Nontyped	145.1	139.7	-5.4
All groups	18,754.9	18,943.7	188.8

Table 4—Volume of softwoods on forest land and change, by survey unit, Arkansas, 2011 and 2012

Survey unit	2011	2012	Change
<i>million cubic feet</i>			
South Delta	519.1	570.1	51.0
North Delta	163.3	186.8	23.5
Southwest	6,178.2	6,407.8	229.6
Ouachita	2,944.2	3,047.0	102.8
Ozark	1,825.5	1,836.8	11.3
All units	11,630.3	12,048.5	418.2

Table 5—Volume of hardwoods on forest land and change, by survey unit, Arkansas, 2011 and 2012

Survey unit	2011	2012	Change
<i>million cubic feet</i>			
South Delta	2,322.8	2,454.8	132.0
North Delta	1,346.5	1,352.6	6.1
Southwest	4,732.1	4,757.0	24.9
Ouachita	2,344.4	2,402.8	58.4
Ozark	7,492.5	7,602.5	110.0
All units	18,238.3	18,569.6	331.3

Table 6—Biomass dry weight of softwoods on forest land and change, by survey unit, Arkansas, 2011 and 2012

Survey unit	2011	2012	Change
<i>thousand tons</i>			
South Delta	10,533.3	11,548.3	1,015.0
North Delta	3,248.3	3,722.5	474.2
Southwest	131,177.4	136,157.7	4,980.3
Ouachita	61,428.3	63,345.8	1,917.5
Ozark	38,949.8	39,056.3	106.5
All units	245,337.2	253,830.6	8,493.4

Table 7—Biomass dry weight of hardwoods on forest land and change, by survey unit, Arkansas, 2011 and 2012

Survey unit	2011	2012	Change
<i>thousand tons</i>			
South Delta	64,494.3	64,066.2	-428.2
North Delta	36,314.3	36,398.4	84.1
Southwest	140,525.1	141,726.7	1,201.6
Ouachita	75,406.1	74,714.2	-691.9
Ozark	227,211.3	227,730.8	519.5
All units	543,951.2	544,636.3	685.1

Table 8—Area of forest land in pine plantations and change, by survey unit, Arkansas, 2011 and 2012

Survey unit	2011	2012	Change
<i>thousand acres</i>			
South Delta	216.5	212.1	-4.4
North Delta	41.4	41.3	-0.1
Southwest	2,189.4	2,285.4	96.0
Ouachita	606.8	616.1	9.3
Ozark	237.1	227.4	-9.7
All units	3,291.4	3,382.3	90.9

Table 9—Volume by softwood species on forest land by 5-inch diameter classes, Arkansas, 2012

Species	Total	Diameter class (inches)					
		5.0–9.9	10.0–14.9	15.0–19.9	20.0–24.9	25.0–29.9	30.0+
Loblolly pine	7,136.5	2,126.9	2,622.9	1,483.6	682.8	194.3	26.0
Shortleaf pine	3,744.9	761.6	1,619.5	1,102.6	247.2	14.0	0.0
Baldcypress	609.6	22.6	73.7	85.7	120.1	89.9	217.6
Eastern red cedar	526.1	332.6	169.5	21.2	2.8	0.0	0.0
Ashe juniper	31.5	9.2	13.6	8.6	0.0	0.0	0.0
Total	12,048.5	3,253.0	4,499.1	2,701.8	1,052.8	298.2	243.6

Table 10—Volume of 10 most dominant hardwoods on forest land by 5-inch diameter classes, Arkansas, 2012

Species	Total	Diameter class (inches)					
		5.0–9.9	10.0–14.9	15.0–19.9	20.0–24.9	25.0–29.9	30.0+
White oak	2,874.5	635.5	1,080.7	748.8	295.2	78.3	36.1
Sweet gum	2,118.7	583.3	725.7	473.9	192.6	95.4	47.9
Post oak	1,559.2	437.9	617.5	335.1	123.6	23.4	21.7
Northern red oak	975.0	154.2	375.8	280.8	131.6	27.9	4.6
Black oak	907.8	153.1	335.4	243.3	122.3	45.1	8.6
Southern red oak	850.0	120.2	270.6	253.7	128.9	63.3	13.3
Water oak	688.1	109.0	184.9	169.1	128.7	68.0	28.6
Black hickory	671.2	323.3	257.6	77.0	9.1	4.2	0.0
Cherrybark oak	670.0	57.5	106.9	194.9	127.3	78.3	105.1
Willow oak	622.4	64.1	115.6	180.7	166.0	53.1	42.8
Other hardwoods	6,632.7	1,846.8	1,885.6	1,310.5	925.9	364.1	299.2
Total	18,569.6	4,484.8	5,956.3	4,267.7	2,351.2	901.1	608.0

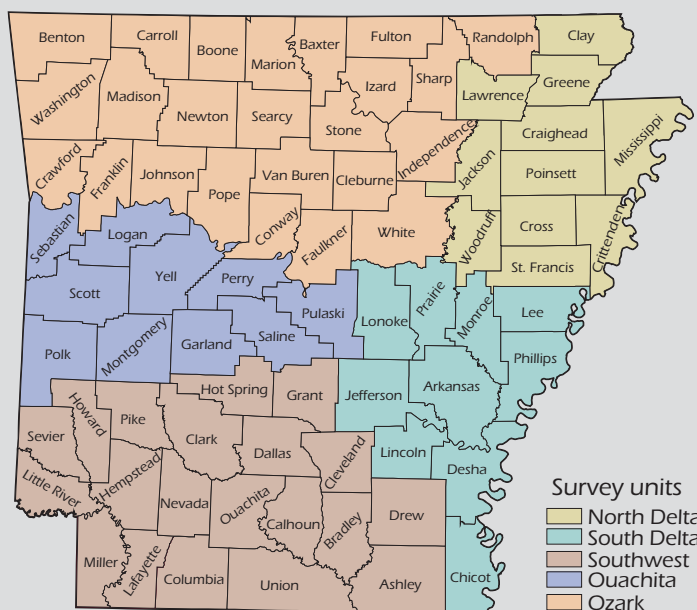


Figure 1—Forest survey units in Arkansas, 2012.

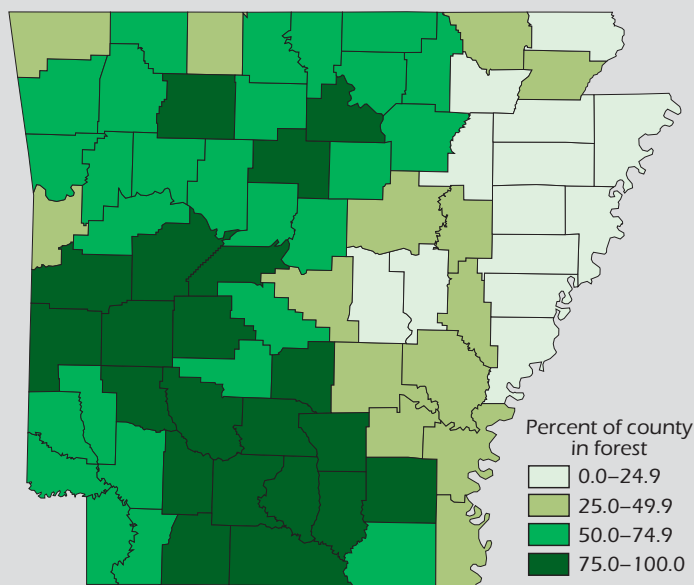


Figure 2—Percent of county area in forest land, Arkansas, 2012.

ARKANSAS, 2012

Spatial attributes of forest resources are an important element of State surveys. Beyond maps, effective density graphs help illustrate the distribution of tree volume across Arkansas (figs. 3 and 4). For example, the 12.0 billion cubic feet of softwood volume was not evenly spread across all forest land. Figure 3 illustrates this spatial variation of softwood volume where the y-axis represents the type of forest land by volume per acre classes. As shown, 66 percent of forest land in Arkansas

was composed of stands that had <500 cubic feet of softwood volume per acre. In contrast, forest land stands with large amounts of softwood volume (>2,000 cubic feet per acre) contained 50 percent of all softwood volume in the State but occurred on only 10 percent of forest land. A similar situation occurred with hardwoods where 46 percent of forest land was in stands with <500 cubic feet of hardwood volume per acre while 16 percent of forest land was in stands with >2,000 cubic feet per acre. This latter class of forest land contained 49 percent of the States hardwood volume (fig. 4).

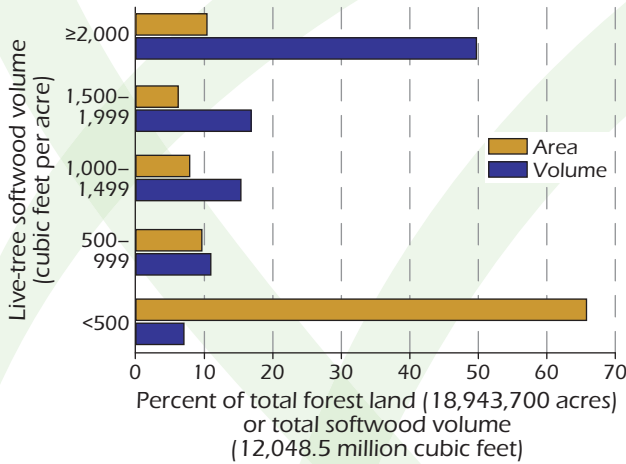


Figure 3—Effective density for live-tree softwood volume by cubic feet per acre class, Arkansas, 2012.

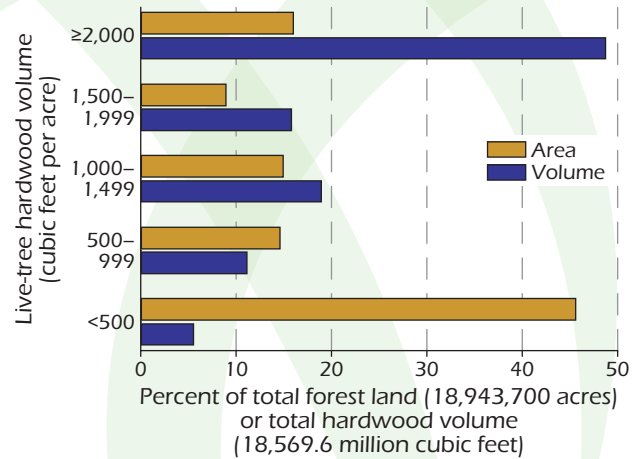


Figure 4—Effective density for live-tree hardwood volume by cubic feet per acre class, Arkansas, 2012.



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Weyerhaeuser nursery, Columbia County, Arkansas. (photo by Teddy Reynolds, Reynolds Forestry Consulting and Real Estate, PLLC)

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