USDA Forest Service, U.S. Department of Agriculture
Northern Research Station

Kansas' Forest Resources, 2007

Research Note NRS-30

This publication provides an overview of forest resource attributes for Kansas based on an annual inventory conducted by the Forest Inventory and Analysis (FIA) program at the Northern Research Station of the U.S. Forest Service. These estimates, along with web-posted core tables, will be updated annually. For more information please refer to page 4 of this report. More comprehensive reports with key findings and definitions are reported every 5 years (Moser et al. 2008).

Table 1. – Annual estimates, uncertainty, and change

	Estimate	Sampling error (%)	Change since 2006 (%)
Forest Land Estimates			
Area (1,000 acres)	2,139.9	3.2	1.7
Number of live trees 1 inch diameter or larger (million trees)	729.8	4.6	-0.6
Dry biomass of live trees 1 inch diameter or larger (1,000 tons)	75,718.9	4.4	1.1
Net volume in live trees (1,000,000 ft^3)	2,877.7	5.0	1.0
Annual net growth of live trees (1,000 ft^3/year)	40,635.9	29.1	-15.8
Annual mortality of live trees (1,000 ft^3/year)	49,705.2	16.4	28.1
Annual removals of live trees (1,000 ft^3/year)	15,939.1	33.7	110.7
Timberland Estimates			
Area (1,000 acres)	2,060.5	3.2	2.0
Number of live trees 1 inch diameter or larger (million trees)	689.4	4.6	-0.2
Biomass of live trees 1 inch diameter or larger (1,000 tons)	73,486.5	4.5	1.4
Net volume in live trees (1,000,000 ft^3)	2,811.2	5.1	1.2
Net volume of growing stock trees (1,000,000 ft^3)	1,465.3	7.0	1.5
Annual net growth of growing stock trees (1,000 ft^3/year)	19,079.4	46.8	7.4
Annual mortality of growing stock trees (1,000 ft^3/year)	15,490.0	26.3	3.6
Annual removals of growing stock trees (1,000 ft^3/year)	8,254.9	38.9	-0.5

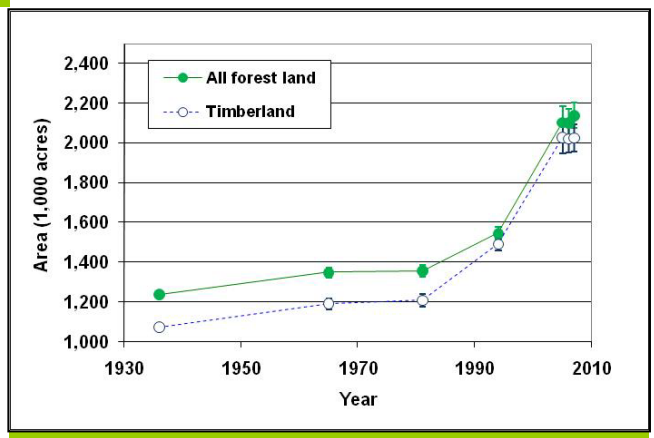


Figure 1. – Area of timberland and forest land by year.

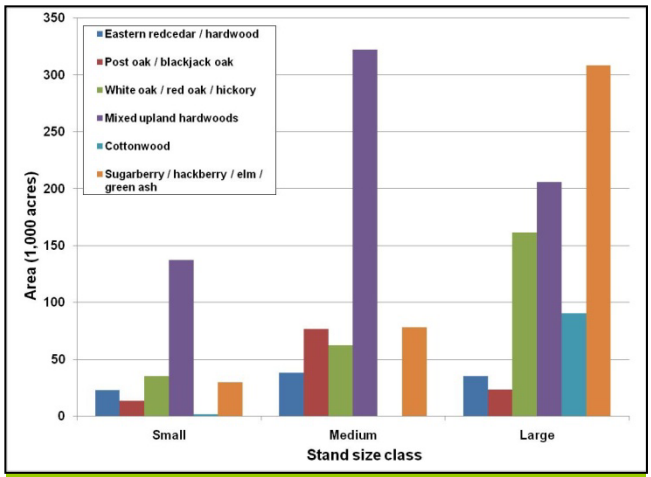


Figure 2. – Area of timberland by top six forest types and stand-size class.

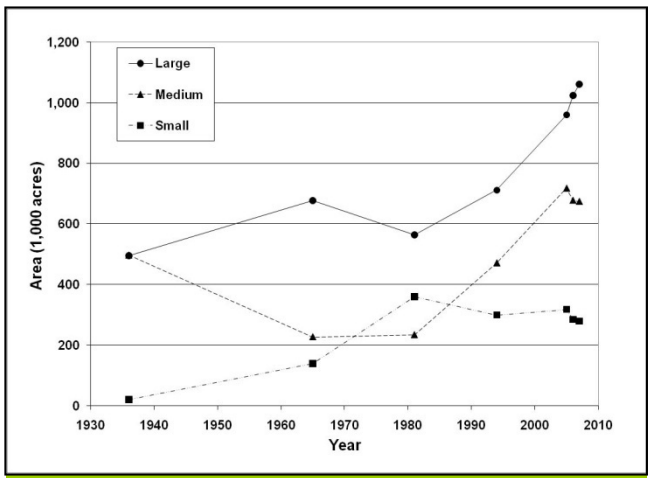


Figure 3. – Area of timberland by stand-size class and year.

Table 2. – Top 10 tree species by statewide volume estimates

Rank	Species	Volume of live trees on forest land (million cubic feet)	Sampling error (%)	Change since 2006 (%)	Volume of sawtimber on timberland (million board feet)	Sampling error (%)	Change since 2006 (%)
1	Hackberry	368.9	11.1	-1.8	768.9	15.7	1.1
2	Cottonwood	338.0	26.5	1.5	1,123.1	28.5	3.0
3	Green ash	232.3	11.6	3.6	383.1	16.8	7.2
4	American elm	222.3	9.1	0.9	176.8	24.1	7.1
5	Osage-orange	192.1	11.6	5.8	0.0	0.0	0.0
6	Black walnut	174.4	10.6	0.6	406.1	15.2	-0.9
7	Bur oak	157.5	17.4	1.5	350.5	24.8	0.5
8	Red mulberry	130.1	15.7	-3.6	61.3	48.6	10.8
9	Northern red oak	105.3	23.2	6.3	414.4	26.5	2.1
10	Honeylocust	102.0	15.3	2.7	62.1	36.0	1.5
	Other softwood species	92.3	16.1	5.1	129.4	28.5	-11.7
	Other hardwood species	762.5	9.1	-0.3	1,564.2	16.5	1.4
	All species	2,877.7	5.0	1.0	5,440.0	8.8	1.8

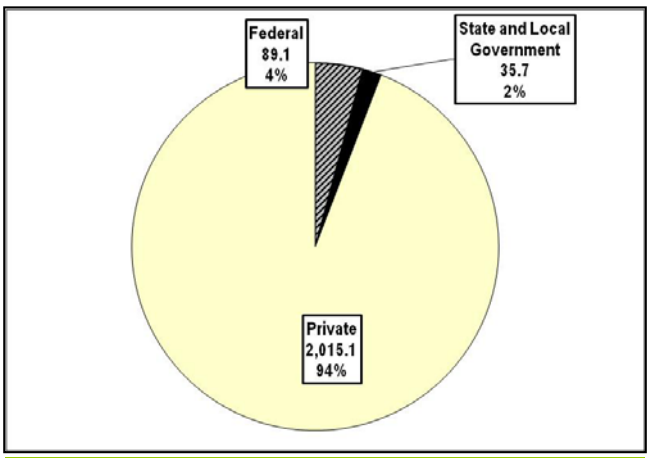
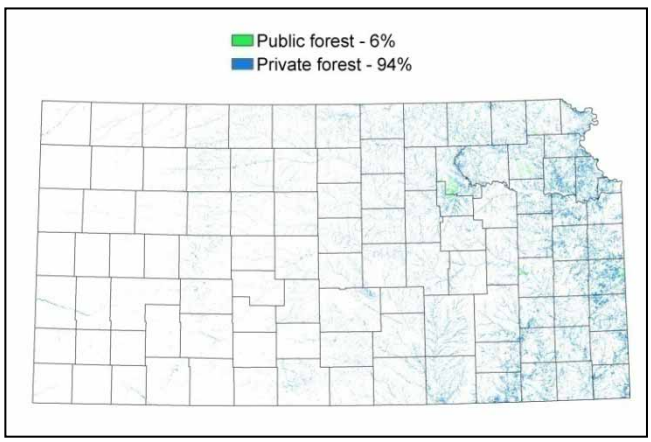


Figure 4. – Area of forest land, in 1,000s of acres, by major owner group (4% of Kansas is forested).

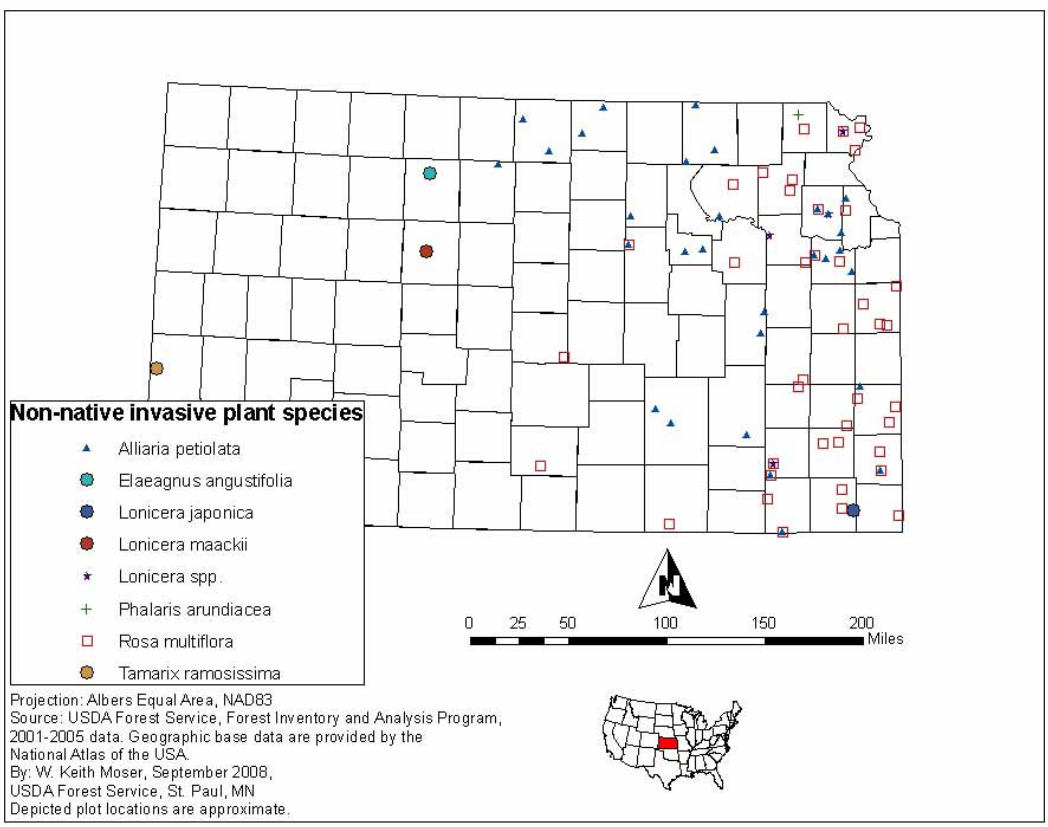
Figure 5. – Forest land in Kansas by ownership.
Map courtesy of D.M. Meneguzzo



Kansas Issue Update – Nonnative Invasive Plants

Nonnative invasive plant species threaten ecosystems across our country, and Kansas is no exception. Invasive species reduce ecosystem diversity and degrade wildlife habitat by displacing native plants. During 2005 and 2006, 100 percent of Phase 2 forested plots were assessed for the presence and cover of any of 25 nonnative invasive plant species. In 2007, the Northern Research Station Forest Inventory and Analysis program (NRS-FIA) expanded its sample of nonnative invasive plants to 24 states, but reduced the sampling intensity to 20 percent of the inventory plots sampled in a year. Additionally, the list of species was expanded from 25 to 43. If a species on the list was found, the percent cover was recorded. Over this 3-year period, NRS-FIA found 138 instances of nonnative invasive plant species on 70 plots. Multiflora rose (*Rosa multiflora*), a woody species, and garlic mustard, an herb, were the predominant invasive species. Like the forest land itself, most of the invasive species were found in eastern Kansas. Invasive species are found in most Kansas forests. Their negative effect on forest health varies and can be difficult to measure. For example, although honeysuckles (*Lonicera* species) were found on only a few plots in eastern Kansas, they tend to dominate the forest understory, making it difficult for native plants to thrive. Garlic mustard out-competes native plants by aggressively monopolizing light, water, nutrients, and space. It is a particular threat to species that complete their life cycles in the spring. Multiflora rose was the most common invasive.

Figure 6. – Nonnative invasive plant species found on forested inventory plots in Kansas.



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