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Forest Statistics for Northeast Oklahoma Counties - 1986

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SUMMARY

The Southern Forest Survey, an activity of the Southern Forest Experiment Station Forest Inventory and Analysis work unit, covers the states of Alabama, Arkansas, Louisiana, Mississippi, Oklahoma, Tennessee, east Texas, and the island of Puerto Rico.

This survey is part of the nationwide Forest Survey originally authorized by the McSweeney-McNary Act of 1928. More recent legislation pertinent to the survey mission includes the Forest and Rangeland Renewable Resources Planning Act of 1974 and the Forest and Rangeland Renewable Resources Research Act of 1978. The survey mission is to develop, analyze, and maintain renewable forest resource information. This information is essential for formulation of forest policies and programs.

ACKNOWLEDGMENTS

The Southern Station gratefully acknowledges the cooperation and assistance provided by the Oklahoma Division of Forestry and forest industries in collecting field data. Appreciation is also expressed for the cooperation of other public agencies and other private landowners in providing access to the sample locations.

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*Core tables are presented in response to the Southern Industrial Forestry Research Council's recommendations. These tables are identical among Forest Inventory and Analysis units in the eastern United States.

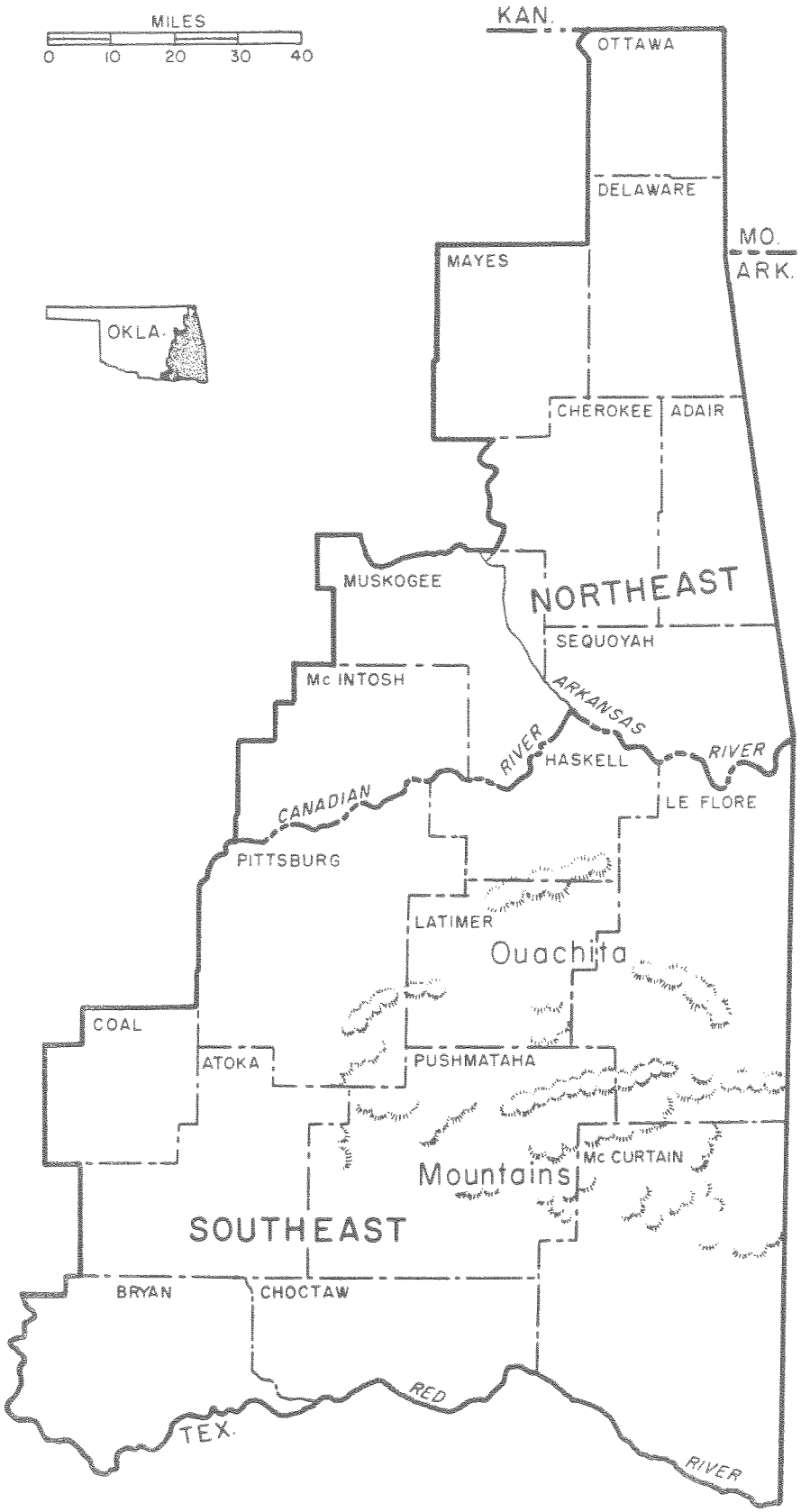

Figure 1.--The Forest Survey Regions of East Oklahoma.

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INTRODUCTION

These tables were derived from data obtained during a 1986 inventory of 8 counties comprising the Northeast Unit of Oklahoma (fig. 1). All comparisons of the 1976 and 1986 forest statistics made in this Bulletin account for this change. The data on forest acreage and timber volume were secured by a systematic sampling method involving a forest-nonforest classification on aerial photographs and on-the-ground measurement of trees at sample locations. The sample locations were at the intersections of a grid of lines spaced 3 miles apart. At each forest location, per acre estimates were obtained from 10 Basal Area 37.5 point samples.

The sampling methods were developed to provide suitable estimates for east Oklahoma. Estimates for smaller areas are presented, but sampling error increases as the area considered decreases. Sampling errors given in Table I are based on one standard deviation or a probability of two chances out of three. To estimate the sampling error for a combination of counties one can use the following:

$$SE_g = \frac{SE_t\sqrt{X_t}}{\sqrt{X_g}}$$

where:

SE = standard error of estimate (expressed as a percent)
X = variable of interest (area or volume)
g = group of counties to be combined
t = total for the unit

Table I – *Sampling errors[1] for timberland, growing stock, and sawtimber, Northeast Oklahoma, 1986*

County	Timberland	Growing stock			Sawtimber volume
		Volume	Growth	Removals	
	Percent				
Adair	2.6	11.5	13.5	40.7	14.4
Cherokee	3.1	22.2	15.5	19.0	25.1
Delaware[3]	2.1	10.7	24.3	22.9	13.6
McIntosh	3.8	36.5	41.0	26.5	44.6
Mayes	2.2	26.3	[2]	...	29.1
Muskogee	3.5	18.7	15.2	48.6	23.7
Sequoyah	3.8	14.0	24.4	[2]	19.2
All counties	1.2	7.9	9.1	37.5	9.4

[1] By random-sampling formula.
[2] Sampling error greater than 50.
[3] Ottawa included in Delaware.

HIGHLIGHTS

Timberland Area

The northeastern region of Oklahoma is 39 percent forested. Most of the forest land is classified as timberland capable of growing at least 20 cubic feet of wood each year. The area of timberland has increased from 1,077 to 1,266 thousand acres since 1976. The increase in timberland is the result of additions from cropland and pasture, and a reclassification of some forest land from woodland (formerly called unproductive forest) to timberland.

Most of the timberland in Northeast Oklahoma is owned by farmers and other individuals. Timberland in corporate ownership increased from 36 to 133 thousand acres.

Oak-hickory accounts for 88 percent of all timberland in Northeast Oklahoma. Acreage in this type group increased by 19 percent since 1976. Nonstocked timberland also increased, from 51 to 175 thousand acres. The area of the sapling-seedling stand-size class declined from 433 to 284 thousand acres. The areas of poletimber and sawtimber stand-size classes increased by about 100 thousand acres each.

Number of Trees

The number of live softwood trees is quite small in northeast Oklahoma. The number of live softwoods increased or stayed the same in most diameter classes.

The number of live hardwood trees increased for all diameter classes except the 6-inch class. The increases were the greatest in the larger diameter classes.

Timber Volume

The volume of softwood growing stock showed no change between 1976 and 1986, although there was some shifting among diameter classes. The volume of hardwood growing stock increased substantially, from 326 to 471 million cubic feet. This continues an increasing trend since 1966. Volume increased across all diameter classes except the 6-inch class. The volume of hardwood sawtimber also increased substantially, from 747 to 1,175 million board feet.

Growth, Removals and Mortality

The average net annual growth of growing stock for all species rose slightly, from 18.4 to 19.8 million cubic feet. Average annual removals of growing stock also increased, from 3.2 to 8.5 million cubic feet. Average annual mortality of growing stock rose from 2.1 to 3.4 million cubic feet for all species.

Tables 1-25 were developed to provide compat bility among Forest Inventory and Analysis Projects. Tables 26-36 are supplementary tables and may change from unit to unit or state to state to address specific resource issues.

DEFINITION OF TERMS

Average annual gross growth. — Average annual net growth plus average annual mortality.

Average net annual growth. — Average net annual volume increase for the inter survey period.

Average annual mortality. — Average annual sound-wood volume of live trees dying from natural causes.

Average annual removals. — Average annual net volume of growing-stock trees removed from the inventory by harvesting, cultural operations (such as timber stand improvement), land clearing, or changes in land use.

Forest type. — A classification of forest land based upon the species forming a plurality of live-tree stocking.

Growing-stock trees. — Live trees of commercial species. Rough and rotten trees are excluded.

Growing-stock volume. — The cubic-foot volume of sound wood in growing-stock trees at least 5.0 inches in diameter at breast height, from a 1-foot stump to a minimum 4.0-inch top diameter outside bark of the central stem, or

to the point where the central stem breaks into limbs.

Noncommercial species. — Tree species of typically small size, poor form, or inferior quality, which normally do not develop into trees suitable for industrial wood products.

Poletimber trees. — Growing-stock trees of commercial species at least 5.0 inches in diameter at breast height but smaller than sawtimber size.

Rotten trees. — Live trees of commercial species that do not contain at least one 12-foot saw log, now or prospectively, primarily because of rot.

Reserved timberland. — Productive public forest land withdrawn from timber utilization through statute or administrative regulations.

Rough trees. — Live trees of commercial species that do not contain at least one 12-foot saw log, now or prospectively, primarily because of roughness or poor form. Also included are all live trees of noncommercial species.

Sawtimber trees. — Live trees that are of commercial species, contain at least a 12-foot saw log, and meet regional specifications for freedom from defect. Softwoods must be at least 9.0 inches in diameter at breast height and hardwoods at least 11.0 inches in diameter at breast height.

Sawtimber volume. — Sound-wood volume of the saw-log portion of live sawtimber trees in board feet, International 1/4-inch rule and in cubic feet.

Site class. — A classification of forest land in terms of inherent capacity to grow crops of industrial wood.

Stand-size class. — A classification of forest land based on the size class of growing-stock trees on the sampled area; that is, sawtimber, poletimber, or sapling and seedling.

Timberland. — Forest land that is producing, or is capable of producing, crops of industrial wood and not withdrawn from timber utilization. Timberland is synonymous with "commercial forest land" in prior reports.

Woodland. — Forest land incapable of yielding crops of industrial wood because of adverse site conditions.

Table 1 – *Area by county and land class, Northeast Oklahoma, 1986*

County	All land[1]	Forest land: Total	Forest land: Timberland[2]	Forest land: Woodland[3]	Forest land: Reserved timberland	Nonforest land
	Thousand acres					
Adair	369.1	205.6	205.6	...	...	163.5
Cherokee	497.2	277.3	257.9	19.3	...	220.0
Delaware[4]	816.5	270.2	270.2	...	...	546.3
McIntosh	455.4	114.6	82.7	31.8	...	340.8
Mayes	437.3	130.5	130.5	...	...	306.8
Muskogee	535.9	138.4	102.5	35.9	...	397.6
Ottawa[4]	...	...	...	...	...	...
Sequoyah	457.7	247.8	216.8	31.0	...	210.0
All counties	3569.1	1384.3	1266.3	118.0	...	2184.9

[1] From U.S. Bureau of the Census.

[2] Forest land (formerly termed commercial forest land) that is producing or capable of producing at least 20 cubic feet of industrial wood per acre per year. Includes areas that may be inaccessible or inoperable by current standards. Excludes reserved timberlands.

[3] Forest land incapable of producing 20 cubic feet of industrial wood per acre per year under natural conditions because of adverse site condition.

[4] Ottawa included in Delaware.

Table 2 – *Area of timberland by county and ownership class, Northeast Oklahoma, 1986*

County	All ownerships	National forest	Misc. federal	State	County and municipal	Forest industry[1]	Farmer	Corporate[2]	Individual[2]
	Thousand acres								
Adair	205.6	...	...	...	...	...	118.4	24.9	62.3
Cherokee	257.9	...	19.3	32.2	...	...	154.8	...	51.6
Delaware[3]	270.2	...	...	6.6	6.6	...	98.9	52.7	105.5
McIntosh	82.7	...	12.7	...	...	...	25.5	6.4	38.2
Mayes	130.5	...	20.6	6.9	...	...	27.5	13.7	61.8
Muskogee	102.5	...	35.9	...	...	...	20.5	10.2	35.9
Sequoyah	216.8	...	24.8	...	...	...	86.7	24.8	80.5
All counties	1266.3	...	113.3	45.7	6.6	...	532.1	132.8	435.7

[1] Includes land leased to forest industry.

[2] Indian land will be classed as corporate or individual as defined by the Bureau of Indian Affairs.

[3] Ottawa included in Delaware.

Table 3 – *Area of timberland by county and forest type group, Northeast Oklahoma, 1986*

County	Total	Forest type group					
		Loblolly-shortleaf pine		Oak-pine	Oak-hickory	Oak-gum cypress	Elm-ash cottonwood
		Planted	Natural				
	Thousand acres						
Adair	205.6	...	12.5	6.2	186.9	...	...
Cherokee	257.9	...	6.4	12.9	225.7	6.4	6.4
Delaware[1]	270.2	...	...	6.6	257.0	6.6	...
McIntosh	82.7	...	...	...	63.6	6.4	12.7
Mayes	130.5	...	6.9	...	109.9	13.7	...
Muskogee	102.5	...	...	...	87.1	15.4	...
Sequoyah	216.8	...	...	12.4	179.6	12.4	12.4
All counties	1266.3	...	25.8	38.1	1109.9	60.9	31.6

[1] Ottawa included in Delaware.

Table 4 - *Area of timberland by county and stand-size class, Northeast Oklahoma, 1986*

County	All classes	Stand-size class			Nonstocked[1] areas
		Sawtimber	Poletimber	Sapling-seedling	
	Thousand acres				
Adair	205.6	87.2	99.7	12.5	6.2
Cherokee	257.9	70.9	129.0	51.6	6.4
Delaware[2]	270.2	33.0	105.5	85.7	46.1
McIntosh	82.7	12.7	6.4	57.3	6.4
Mayes	130.5	27.5	34.3	27.5	41.2
Muskogee	102.5	20.5	56.4	...	25.6
Sequoyah	216.8	24.8	99.1	49.6	43.4
All counties	1266.3	276.6	530.3	284.0	175.4

[1] Timberland less than 16.7 percent stocked.

[2] Ottawa included in Delaware.

Table 5 – *Area of timberland by county and site class, Northeast Oklahoma, 1986*

County	All classes	Site class (cubic feet/acre/year)				
		>165	120-165	85-120	50-85	<50
	Thousand acres					
Adair	205.6	...	...	...	124.6	81.0
Cherokee	257.9	...	6.4	19.3	103.2	129.0
Delaware[1]	270.2	...	...	6.6	118.6	145.0
McIntosh	82.7	...	...	...	38.2	44.5
Mayes	130.5	...	...	6.9	48.1	75.6
Muskogee	102.5	...	...	5.1	35.9	61.5
Sequoyah	216.8	...	...	18.6	86.7	111.5
All counties	1266.3	...	6.4	56.5	555.3	648.0

[1] Ottawa included in Delaware.

Table 6 – *Area of timberland by county and stocking classes of growing-stock trees, Northeast Oklahoma, 1986*

County	All classes	Stocking class (percent) >130	100-130	60-100	16.7-60	<16.7
	Thousand acres					
Adair	205.6	...	...	81.0	118.4	6.2
Cherokee	257.9	...	12.9	103.2	135.4	6.4
Delaware[1]	270.2	...	...	19.8	204.3	46.1
McIntosh	82.7	...	...	25.5	50.9	6.4
Mayes	130.5	...	...	...	89.3	41.2
Muskogee	102.5	...	...	25.6	51.2	25.6
Sequoyah	216.8	...	...	31.0	142.5	43.4
All counties	1266.3	...	12.9	286.0	792.0	175.4

[1] Ottawa included in Delaware.

Table 7 – *Area of timberland by forest type and ownership class, Northeast Oklahoma, 1986*

Forest type[1]	All ownerships	National forest	Other public	Forest industry	Forest industry-leased	Other private
	Thousand acres					
Loblolly-shortleaf pine	25.8	...	6.9	...	...	18.9
Softwood total	25.8	...	6.9	...	...	18.9
Oak-pine	38.1	...	...	...	...	38.1
Oak-hickory	1109.9	...	113.4	...	...	996.5
Oak-gum-cypress	60.9	...	32.7	...	...	28.2
Elm-ash-cottonwood	31.6	...	12.6	...	...	19.0
Hardwood total	1240.5	...	158.7	...	...	1081.7
All types	1266.3	...	165.6	...	...	1100.6

[1] Forest type is based on species plurality of all live trees. Mixed types that in combination contain a majority of hardwood stocking are hardwood types.

Table 8 – *Area of timberland by ownership and stocking classes of growing-stock trees, Northeast Oklahoma, 1986*

Ownership class	All classes	Stocking class (percent) >130	100-130	60-100	16.7-60	<16.7
	Thousand acres					
Other public	165.6	...	...	43.5	110.6	11.6
Other private	1100.6	...	12.9	242.5	681.4	163.8
All ownerships	1266.3	...	12.9	286.0	792.0	175.4

Table 9 – *Area of timberland by forest type and stand-size class, Northeast Oklahoma, 1986*

Forest type[1]	All classes	Stand-size class			Nonstocked[2] areas
		Sawtimber	Poletimber	Sapling-seedling	
	Thousand acres				
Loblolly-shortleaf pine	25.8	12.7	6.9	6.2	...
Softwood total	25.8	12.7	6.9	6.2	...
Oak-pine	38.1	12.4	12.6	13.0	...
Oak-hickory	1109.9	214.6	504.2	227.1	164.1
Oak-gum-cypress	60.9	30.4	6.6	12.6	11.3
Elm-ash-cottonwood	31.6	6.4	...	25.1	...
Hardwood total	1240.5	263.9	523.4	277.8	175.4
All types	1266.3	276.6	530.3	284.0	175.4

[1] Forest type is based on species plurality of all live trees. Mixed types that in combination contain a majority of hardwood stocking are hardwood type.

[2] Timberland less than 16.7 percent stocked.

Table 10 – *Number of live trees on timberland by species and diameter class, Northeast Oklahoma, 1986*

Species	All classes	1.0-2.9	3.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 & larger
	Diameter class (inches at breast height)												
	Thousand trees												
Shortleaf-loblolly pine	24492	14492	4699	1524	1406	1056	823	320	143	29	...	...	...
Other softwoods	5763	3852	1188	428	257	38	...	...	...	...	...	...	...
Total softwoods	30254	18344	5886	1951	1663	1094	823	320	143	29	...	...	...
Select white oaks	36815	19261	9297	3268	1739	1437	854	368	245	123	92	131	...
Select red oaks	13253	7105	583	1093	1321	1208	890	341	228	244	88	104	49
Other white oaks	110177	49135	30397	12523	8794	3968	2230	1335	884	353	252	306	...
Other red oaks	86345	40909	16871	7229	7122	5385	3116	2489	1479	833	349	535	27
Hickory	100712	68926	15643	7848	3588	2172	1268	705	283	163	45	63	7
Hard maple	3053	2460	...	185	165	81	27	108	18	...	...	8	...
Soft maple	9151	6356	1632	412	155	162	126	115	74	15	67	18	19
Tupelo-blackgum	7012	4760	1209	415	218	85	90	137	69	...	23	6	...
Ash	11658	7146	583	1818	740	564	393	164	141	52	21	32	4
Cottonwood-aspen	8235	7383	568	267	...	...	...	...	...	...	11	6	...
Black walnut	7495	4202	2416	235	125	243	83	110	15	14	40	7	4
Other hardwoods	188704	143752	26623	10501	3453	2119	1052	538	328	78	121	112	24
Total hardwoods	582610	361396	105824	45795	27421	17425	10130	6410	3763	1875	1108	1328	135
Noncommercial	82861	48151	18651	6321	4400	3031	900	693	366	250	88	10	...
All species	695725	427891	130361	54067	33485	21551	11853	7423	4272	2154	1196	1338	135

Table 11 – *Number of growing-stock trees on timberland by species and diameter class, Northeast Oklahoma, 1986*

Species	All classes	1.0-2.9	3.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 & larger
	Diameter class (inches at breast height)												
	Thousand trees												
Shortleaf-loblolly pine	16807	8760	3560	1080	1137	1002	791	320	143	15	...	...	...
Other softwoods	5049	3382	1188	314	165	...	...	...	...	...	...	...	...
Total softwoods	21856	12142	4747	1394	1302	1002	791	320	143	15	...	...	...
Select white oaks	11771	3424	2856	2231	1383	923	531	211	125	52	...	35	...
Select red oaks	5837	1774	...	879	1116	947	515	204	158	122	33	55	34
Other white oaks	43706	6452	16265	9562	6683	2630	1125	580	292	71	22	24	...
Other red oaks	41077	12882	9362	5229	5599	3680	1752	1304	653	347	137	122	10
Hickory	32549	15127	7253	5414	2202	1251	714	363	143	57	...	21	3
Hard maple	72	...	...	...	...	...	27	45	...	...	...	...	...
Soft maple	979	571	...	...	68	123	94	25	39	...	59	...	...
Tupelo-blackgum	2411	1142	604	251	72	44	90	116	69	...	23	...	...
Ash	3260	1766	...	554	336	211	136	120	90	25	21	...	...
Cottonwood-aspen	845	568	...	267	...	...	...	...	...	...	11	...	...
Black walnut	215	...	...	...	73	37	33	25	15	14	11	7	...
Other hardwoods	30836	17955	5690	3517	1457	1171	532	232	187	...	54	35	5
Total hardwoods	173558	61661	42031	27904	18989	11017	5549	3224	1772	688	370	301	52
All species	195414	73803	46778	29298	20291	12019	6340	3544	1914	703	370	301	52

Table 12 – *Volume of growing stock on timberland by species and diameter class, Northeast Oklahoma, 1986*

Species	All classes	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 & larger
	Diameter class (inches at breast height)										
	Million cubic feet										
Shortleaf-loblolly pine	41.0	3.1	5.8	10.2	11.5	6.4	3.6	0.4	...	...	...
Other softwoods	1.2	0.4	0.7	...	...	...	...	...	...	...	...
Total softwoods	42.2	3.6	6.5	10.2	11.5	6.4	3.6	0.4	...	...	...
Select white oaks	38.5	5.6	7.0	8.1	7.2	4.3	2.9	1.5	...	1.9	...
Select red oaks	49.8	1.7	5.8	9.6	8.0	4.3	4.5	4.7	1.8	3.9	5.5
Other white oaks	96.1	19.5	27.6	19.2	11.6	9.3	5.7	1.6	0.6	1.0	...
Other red oaks	147.6	10.9	25.8	29.4	22.3	22.4	15.2	10.0	4.8	5.8	0.9
Hickory	54.0	10.3	10.4	9.6	9.4	7.2	3.1	1.9	...	1.6	0.5
Hard maple	1.1	...	...	...	0.4	0.7	...	...	...	...	...
Soft maple	8.6	...	0.3	1.5	1.5	0.7	1.2	...	3.5	...	...
Tupelo-blackgum	7.6	0.6	0.3	0.3	1.1	2.2	1.9	...	1.1	...	...
Ash	14.0	2.1	1.4	1.9	1.7	2.4	2.7	1.0	0.8	...	...
Cottonwood-aspen	0.7	0.4	...	...	...	...	...	...	0.3	...	...
Black walnut	3.1	...	0.3	0.3	0.4	0.5	0.6	0.2	0.5	0.4	...
Other hardwoods	50.4	7.9	7.7	9.7	8.1	4.7	5.6	...	2.3	3.2	1.1
Total hardwoods	471.4	59.0	86.6	89.5	71.6	58.9	43.4	20.9	15.7	17.7	8.0
All species	513.6	62.6	93.1	99.7	83.1	65.2	47.1	21.4	15.7	17.7	8.0

Table 13 – *Volume of growing stock in the saw log portion of sawtimber[1] trees on timberland by species and diameter class, Northeast Oklahoma, 1986*

Species	Diameter class (inches at breast height)								
	All classes	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 & larger
	Million cubic feet								
Shortleaf-loblolly pine	29.0	8.6	10.6	6.0	3.5	0.4	...	...	...
Total softwoods	29.0	8.6	10.6	6.0	3.5	0.4	...	...	...
Select white oaks	14.5	...	5.6	3.5	2.6	1.2	...	1.5	...
Select red oaks	28.2	...	6.5	3.7	4.0	4.2	1.5	3.4	5.0
Other white oaks	26.2	...	10.0	8.1	5.2	1.4	0.6	0.9	...
Other red oaks	69.2	...	17.7	19.4	13.2	8.8	4.2	5.2	0.8
Hickory	19.7	...	7.3	6.2	2.7	1.7	...	1.3	0.5
Hard maple	1.1	...	0.4	0.7	...	...	...	...	...
Soft maple	5.9	...	1.0	0.6	1.0	...	3.3	...	...
Tupelo-blackgum	5.8	...	1.0	2.0	1.8	...	1.1	...	...
Ash	7.3	...	1.4	1.9	2.2	1.0	0.7	...	...
Cottonwood-aspen	0.2	...	...	...	...	...	0.2	...	...
Black walnut	1.9	...	0.2	0.4	0.5	0.2	0.4	0.3	...
Other hardwoods	20.5	...	6.0	3.6	4.7	...	1.9	3.2	1.0
Total hardwoods	200.5	...	57.0	50.2	37.8	18.5	13.9	15.8	7.3
All species	229.5	8.6	67.6	56.2	41.3	18.9	13.9	15.8	7.3

[1] That part of the bole of sawtimber trees between the 1-foot stump and the saw-log top, including the portion of the forks large enough to contain a saw log.

Table 14 – *Volume of sawtimber on timberland by species and diameter class, Northeast Oklahoma, 1986*

Species	All classes	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 & larger
	Diameter class (inches at breast height)								
	Million board feet								
Shortleaf-loblolly pine	160.3	44.4	59.2	33.3	20.4	3.0	...	...	...
Total softwoods	160.3	44.4	59.2	33.3	20.4	3.0	...	...	...
Select white oaks	83.3	...	29.8	20.6	15.9	7.5	...	9.4	...
Select red oaks	166.7	...	35.6	21.4	22.9	26.8	9.6	20.2	30.2
Other white oaks	148.7	...	51.7	46.8	31.7	8.6	3.9	5.8	...
Other red oaks	409.3	...	94.1	111.6	78.6	56.2	28.2	35.1	5.5
Hickory	114.8	...	39.7	35.8	17.1	11.1	...	8.9	2.2
Hard maple	6.3	...	2.0	4.3	...	...	...	...	...
Soft maple	34.9	...	5.2	4.0	5.7	...	20.0	...	...
Tupelo-blackgum	33.4	...	5.1	11.2	9.8	...	7.3	...	...
Ash	42.8	...	7.8	11.4	13.6	6.3	3.7	...	...
Cottonwood-aspen	1.2	...	...	...	...	...	1.2	...	...
Black walnut	12.7	...	1.0	2.1	3.4	1.4	2.9	1.9	...
Other hardwoods	120.9	...	33.1	21.8	29.8	...	12.4	19.9	3.8
Total hardwoods	1174.9	...	305.1	291.0	228.6	118.0	89.2	101.3	41.7
All species	1335.2	44.4	364.3	324.4	249.0	121.0	89.2	101.3	41.7

Table 15 – *Volume of growing stock and sawtimber on timberland by county and species group, Northeast Oklahoma, 1986*

County	Growing Stock						Sawtimber					
		Softwood			Hardwood			Softwood			Hardwood	
		Pine						Pine				
	All species	Planted	Natural	Other	Soft[1]	Hard[2]	All species	Planted	Natural	Other	Soft[1]	Hard[2]
	Million cubic feet						*Million board feet*					
Adair	138.9	...	14.7	...	8.0	116.2	391.4	...	64.0	...	30.7	296.6
Cherokee	149.5	...	12.4	...	24.8	112.3	416.6	...	46.1	...	71.0	299.5
Delaware[3]	67.9	...	2.8	0.3	2.8	62.0	169.0	...	14.6	...	6.5	147.9
McIntosh	26.7	...	...	0.2	6.2	20.3	75.1	...	...	...	21.2	53.9
Mayes	37.9	...	5.4	...	8.5	24.0	118.0	...	14.8	...	34.3	69.0
Muskogee	41.7	...	0.2	...	9.1	32.5	61.8	...	0.5	...	14.7	46.5
Sequoyah	51.0	...	5.5	0.7	4.3	40.6	103.3	...	20.3	...	9.0	74.0
All counties	513.6	...	41.0	1.2	63.7	407.7	1335.2	...	160.3	...	187.5	987.4

[1] Hardwood species with an average specific gravity of 0.50 or less such as gums, yellow-poplar, cottonwood, red maple, basswood, aspen, and willow.

[2] Hardwood species with an average specific gravity greater than 0.50 such as oaks, hard maple, hickories, and green and white ash.

[3] Ottawa included in Delaware.

Table 16 – *Volume of timber on timberland by class of timber and species group, Northeast Oklahoma, 1986*

Class of timber	All species	Softwood			Hardwood	
		Pine				
		Planted	Natural	Other	Soft[1]	Hard[2]
	Million cubic feet					
Sawtimber trees:						
Saw-log portion	229.5	...	29.0	...	31.9	168.6
Upper-stem portion	38.8	...	3.0	...	5.9	29.9
Total	268.3	...	32.1	...	37.8	198.5
Poletimber trees	245.2	...	8.9	1.2	25.9	209.2
All growing-stock trees	513.6	...	41.0	1.2	63.7	407.7
Rough trees:						
Sawtimber size	123.0	...	0.6	0.4	15.6	106.4
Poletimber size	115.0	...	1.7	0.4	15.2	97.8
Total	237.9	...	2.3	0.7	30.7	204.2
Rotten trees:						
Sawtimber size	68.5	...	0.4	...	5.2	62.8
Poletimber size	10.4	...	...	...	0.9	9.4
Total	78.9	...	0.4	...	6.2	72.2
Salvable dead trees:						
Sawtimber size	1.1	...	...	...	0.4	0.7
Poletimber size	4.8	...	...	...	0.7	4.1
Total	6.0	...	...	...	1.1	4.8
All classes	836.3	...	43.7	1.9	101.7	689.0

[1] Hardwood species with an average specific gravity of 0.50 or less such as gums, yellow-poplar, cottonwood, red maple, basswood, aspen, and willow.

[2] Hardwood species with an average specific gravity greater than 0.50 such as oaks, hard maple, hickories, and green and white ash.

Table 17 - *Volume of live trees and growing stock on timberland by ownership class and species group, Northeast Oklahoma, 1986*

Ownership class	Growing stock						Sawtimber					
		Softwood			Hardwood			Softwood			Hardwood	
		Pine						Pine				
	All species	Planted	Natural	Other	Soft[1]	Hard[2]	All species	Planted	Natural	Other	Soft[1]	Hard[2]
	Million cubic feet						*Million board feet*					
Other public	105.2	...	6.4	0.2	20.5	78.1	66.7	...	5.6	0.2	12.6	48.2
Other private	725.1	...	37.3	1.7	80.1	606.1	446.9	...	35.4	0.9	51.1	359.5
All ownerships	830.4	...	43.7	1.9	100.6	684.2	513.6	...	41.0	1.2	63.7	407.7

[1] Hardwood species with an average specific gravity of 0.50 or less such as gums, yellow-poplar, cottonwood, red maple, basswood, aspen, and willow.

[2] Hardwood species with an average specific gravity greater than 0.50 such as oaks, hard maple, hickories, and green and white ash.

Table 18 – *Average net annual growth of growing stock and sawtimber on timberland by county and species group, Northeast Oklahoma, 1986*

County	Growing stock						Sawtimber					
		Softwood			Hardwood			Softwood			Hardwood	
		Pine						Pine				
	All species	Planted	Natural	Other	Soft[1]	Hard[2]	All species	Planted	Natural	Other	Soft[1]	Hard[2]
	Million cubic feet						*Million board feet*					
Adair	4.0	...	0.2	...	0.1	3.6	13.5	...	1.4	...	0.4	11.7
Cherokee	4.5	...	0.4	...	0.2	3.9	12.7	...	1.6	...	0.7	10.5
Delaware[3]	2.2	...	0.1	...	...	2.1	8.3	...	0.7	...	0.1	7.4
McIntosh	1.9	...	...	...	0.1	1.7	6.1	...	...	...	0.5	5.6
Mayes	1.1	...	0.3	...	0.3	0.5	4.6	...	1.6	...	1.0	2.0
Muskogee	2.4	...	...	...	0.3	2.1	4.3	...	...	...	-0.1	4.4
Sequoyah	3.7	...	0.7	0.1	0.5	2.4	8.2	...	2.0	...	1.6	4.6
All counties	19.8	...	1.7	0.2	1.6	16.4	57.8	...	7.3	...	4.2	46.2

[1] Hardwood species with an average specific gravity of 0.50 or less such as gums, yellow-poplar, cottonwood, red maple, basswood, aspen, and willow.

[2] Hardwood species with an average specific gravity greater than 0.50 such as oaks, hard maple, hickories, and green and white ash.

[3] Ottawa included in Delaware.

Table 19 – *Average annual removals of growing stock and sawtimber on timberland by county and species group, Northeast Oklahoma, 1986*

County	Growing stock						Sawtimber					
		Softwood			Hardwood			Softwood			Hardwood	
		Pine						Pine				
	All species	Planted	Natural	Other	Soft[1]	Hard[2]	All species	Planted	Natural	Other	Soft[1]	Hard[2]
	Million cubic feet						*Million board feet*					
Adair	0.3	...	...	...	...	0.3	0.8	...	...	...	...	0.8
Cherokee	1.2	...	...	...	...	1.1	2.4	...	...	...	0.3	2.1
Delaware[3]	1.4	...	...	...	...	1.3	3.4	...	0.2	...	0.2	3.0
McIntosh	0.4	...	...	...	...	0.4	1.1	...	...	...	...	1.1
Mayes	0.1	...	0.1	...	...	...	0.4	...	0.4	...	...	...
Muskogee	0.3	...	...	...	...	0.2	0.4	...	...	...	...	0.4
Sequoyah	4.9	...	3.3	...	1.1	0.5	17.0	...	13.3	...	2.5	1.3
All counties	8.5	...	3.4	...	1.2	3.8	25.6	...	13.9	...	3.0	8.7

[1] Hardwood species with an average specific gravity of 0.50 or less such as gums, yellow-poplar, cottonwood, red maple, basswood, aspen, and willow.

[2] Hardwood species with an average specific gravity greater than 0.50 such as oaks, hard maple, hickories, and green and white ash.

[3] Ottawa included in Delaware.

Table 20 – *Average net annual growth and average annual removals of growing stock on timberland, Northeast Oklahoma, 1986*

Species	Growth	Removals
	Million cubic feet	
Yellow pines	1.7	3.4
Other softwoods	0.2	...
Total softwoods	1.9	3.4
Select white-red oaks	3.4	0.2
Other white-red oaks	10.5	3.0
Hickory	1.9	0.5
Hard maple	0.1	...
Ash-walnut-black cherry	0.4	...
Other hardwoods	1.6	1.3
Total hardwoods	17.9	5.0
All species	19.8	8.5

Table 21 – *Average net annual growth and average annual removals of sawtimber on timberland, Northeast Oklahoma, 1986*

Species	Growth	Removals
	Million board feet	
Yellow pines	7.3	13.9
Total softwoods	7.3	13.9
Select white-red oaks	12.5	0.1
Other white-red oaks	26.6	7.1
Hickory	3.8	1.2
Hard maple	0.5	...
Ash-walnut-black cherry	2.6	...
Other hardwoods	4.4	3.3
Total hardwoods	50.4	11.7
All species	57.8	25.6

Table 22 – *Average annual mortality of growing stock and sawtimber on timberland by species, Northeast Oklahoma, 1986*

Species	Growing stock	Sawtimber
	Million cubic feet	*Million board feet*
Yellow pines	0.1	...
Total softwoods	0.1	...
Select white-red oaks	0.2	0.7
Other white-red oaks	1.2	1.4
Hickory	0.6	1.8
Ash-walnut-black cherry	0.2	...
Other hardwoods	1.1	4.2
Total hardwoods	3.3	8.2
All species	3.4	8.2

Table 23 – *Average net annual growth and average annual removals of growing stock on timberland by ownership class and species group, Northeast Oklahoma, 1986*

	Growth						Removals					
		Softwood			Hardwood			Softwood			Hardwood	
		Pine						Pine				
Ownership class	All species	Planted	Natural	Other	Soft[1]	Hard[2]	All species	Planted	Natural	Other	Soft[1]	Hard[2]
	Million cubic feet											
Other public	3.2	...	0.3	...	0.3	2.5	1.2	...	0.1	...	1.0	0.1
Other private	16.6	...	1.4	0.2	1.2	13.8	7.3	...	3.4	...	0.3	3.7
All ownerships	19.8	...	1.7	0.2	1.6	16.4	8.5	...	3.4	...	1.2	3.8

[1] Hardwood species with an average specific gravity of 0.50 or less such as gums, yellow-poplar, cottonwood, red maple, basswood, aspen, and willow.

[2] Hardwood species with an average specific gravity greater than 0.50 such as oaks, hard maple, hickories, and green and white ash.

Table 24 – *Average net annual growth and average annual removals of sawtimber on timberland by ownership class and species group, Northeast Oklahoma, 1986*

Ownership class	Growth						Removals					
	All species	Softwood			Hardwood		All species	Softwood			Hardwood	
		Pine						Pine				
		Planted	Natural	Other	Soft[1]	Hard[2]		Planted	Natural	Other	Soft[1]	Hard[2]
	Million board feet											
Other public	7.4	...	1.6	...	-0.3	6.0	2.5	...	0.4	...	1.8	0.3
Other private	50.4	...	5.7	...	4.5	40.2	23.0	...	13.5	...	1.2	8.4
All ownerships	57.8	...	7.3	...	4.2	46.2	25.6	...	13.9	...	3.0	8.7

[1] Hardwood species with an average specific gravity of 0.50 or less such as gums, yellow-poplar, cottonwood, red maple, basswood, aspen, and willow.

[2] Hardwood species with an average specific gravity greater than 0.50 such as oaks, hard maple, hickories, and green and white ash.

Table 25 – *Volume of sawtimber on timberland by species and tree grade, Northeast Oklahoma, 1986*

Species	All grades	Grade 1	Grade 2	Grade 3	Grade 4
	Million board feet				
Yellow pines	160.3	9.4	54.7	96.2	...
Total softwoods	160.3	9.4	54.7	96.2	...
Select white-red oaks	250.0	32.5	41.9	73.6	102.0
Other white-red oaks	558.0	3.9	63.6	283.7	206.8
Hickory	114.8	...	12.4	48.0	54.3
Hard maple	6.3	...	...	...	6.3
Tupelo and blackgum	33.4	3.3	11.1	13.9	5.1
Ash-walnut-black cherry	55.4	18.7	18.1	14.7	3.9
Other hardwoods	157.0	22.7	29.1	77.6	27.6
Total hardwoods	1174.9	81.1	176.2	511.5	406.1
All species	1335.2	90.5	230.9	607.7	406.1

Table 26 – *Area of timberland by stand age, forest type group, and type of regeneration, Northeast Oklahoma, 1986*

Stand age class	Pine		Oak-pine		Other hardwood types	
	Artificial	Natural	Artificial	Natural	Artificial	Natural
	Thousand acres					
1-10	...	...	...	...	...	42.9
11-20	...	...	...	...	...	25.9
21-30	...	...	...	...	...	...
31-40	...	...	...	...	...	19.1
41-50	...	...	...	...	...	63.5
>50	...	...	...	...	...	32.2
Mixed	...	25.8	...	38.1	...	1018.8
All classes	...	25.8	...	38.1	...	1202.4

Table 27 – *Volume of softwood growing stock on timberland by forest type, Northeast Oklahoma, 1986*

County	Total	Forest type group			
		Loblolly-shortleaf pine		Oak-pine	Oak-hickory
		Planted	Natural		
	Million cubic feet				
Adair	14.7	...	9.3	3.6	1.8
Cherokee	12.4	...	7.6	2.3	2.5
Delaware[1]	3.1	...	...	...	3.1
McIntosh	0.2	...	...	...	0.2
Mayes	5.4	...	5.4	...	...
Muskogee	0.2	...	...	...	0.2
Sequoyah	6.1	...	...	5.5	0.7
All counties	42.2	...	22.3	11.3	8.5

[1] Ottawa included in Delaware.

Table 28 – *Volume of hardwood growing stock on timberland by forest type, Northeast Oklahoma, 1986*

County	Total	Forest type group					
		Loblolly-shortleaf pine		Oak-pine	Oak-hickory	Oak-gum-cypress	Elm-ash-cottonwood
		Planted	Natural				
	Million cubic feet						
Adair	124.2	...	2.5	2.6	119.0	...	...
Cherokee	137.1	...	...	2.9	109.4	13.7	11.0
Delaware[1]	64.8	...	...	0.3	63.2	1.3	...
McIntosh	26.5	...	...	...	22.8	1.9	1.8
Mayes	32.5	...	0.7	...	22.1	9.7	...
Muskogee	41.5	...	...	...	33.5	8.1	...
Sequoyah	44.9	...	...	3.4	39.7	1.1	0.7
All counties	471.4	...	3.2	9.3	409.7	35.8	13.4

[1] Ottawa included in Delaware.

Table 29 – *Volume of softwood growing stock in the saw-log portion of sawtimber trees on timberland by forest type, Northeast Oklahoma, 1986*

County	Total	Forest type group			
		Loblolly-shortleaf pine		Oak-pine	Oak-hickory
		Planted	Natural		
	Million cubic feet				
Adair	11.9	...	7.4	3.2	1.3
Cherokee	8.4	...	5.2	1.0	2.2
Delaware[1]	2.4	...	...	...	2.4
McIntosh	...	...	...	...	...
Mayes	2.6	...	2.6	...	...
Muskogee	0.1	...	...	...	0.1
Sequoyah	3.7	...	...	3.7	...
All counties	29.0	...	15.2	7.9	6.0

[1] Ottawa included in Delaware.

Table 30 – *Volume of hardwood growing stock in the saw log portion of sawtimber trees on timberland by forest type, Northeast Oklahoma, 1986*

County	Total	Forest type group					
		Loblolly-shortleaf pine		Oak-pine	Oak-hickory	Oak-gum-cypress	Elm-ash-cottonwood
		Planted	Natural				
	Million cubic feet						
Adair	57.6	...	1.1	1.9	54.7	...	...
Cherokee	64.5	...	...	1.3	46.1	10.5	6.7
Delaware[1]	24.9	...	...	...	24.3	0.6	...
McIntosh	12.2	...	...	...	10.7	0.4	1.2
Mayes	16.7	...	...	...	10.9	5.8	...
Muskogee	10.3	...	...	...	6.5	3.8	...
Sequoyah	14.2	...	...	0.9	12.8	0.2	0.2
All counties	200.5	...	1.1	4.0	166.1	21.3	8.0

[1] Ottawa included in Delaware.

Table 31 – *Volume of timber on timberland by county, class of timber, and species group, Northeast Oklahoma, 1986*

County	All classes	Growing stock		Rough		Rotten	
		Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood
	Million cubic feet						
Adair	195.2	14.7	124.2	1.1	45.2	...	10.0
Cherokee	207.8	12.4	137.1	...	46.6	...	11.7
Delaware[1]	143.0	3.1	64.8	0.4	47.3	0.4	27.0
McIntosh	46.4	0.2	26.5	0.2	18.1	...	1.5
Mayes	81.7	5.4	32.5	0.7	21.0	...	22.0
Muskogee	70.6	0.2	41.5	...	26.6	...	2.3
Sequoyah	85.8	6.1	44.9	0.6	30.3	...	3.9
All counties	830.4	42.2	471.4	3.0	234.9	0.4	78.4

[1] Ottawa included in Delaware.

Table 32 – *Number of live trees on timberland by detailed species and diameter class, Northeast Oklahoma, 1986*

Species	All classes	1.0-2.9	3.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 & larger
	Diameter class (inches at breast height)												
	Thousand trees												
Shortleaf pine	24450	14492	4699	1524	1406	1015	823	320	143	29	...	...	...
Loblolly pine	42	...	...	...	...	42	...	...	...	...	...	...	...
Redcedar	5763	3852	1188	428	257	38	...	...	...	...	...	...	...
Total softwoods	30254	18344	5886	1951	1663	1094	823	320	143	29	...	...	...
Select white oaks	36815	19261	9297	3268	1739	1437	854	368	245	123	92	131	...
Select red oaks	13253	7105	583	1093	1321	1208	890	341	228	244	88	104	49
Other white oaks	110177	49135	30397	12523	8794	3968	2230	1335	884	353	252	306	...
Other red oaks	86345	40909	16871	7229	7122	5385	3116	2489	1479	833	349	535	27
Sweet pecan	3982	3403	...	273	128	54	60	...	...	13	21	23	7
Other hickories	96730	65524	15643	7575	3460	2119	1208	705	283	149	23	40	...
Persimmon	10305	8699	1159	446	...	...	...	...	...	...	...	...	...
Hard maple	3053	2460	...	185	165	81	27	108	18	...	...	8	...
Soft maple	7863	6356	571	412	87	120	94	73	39	15	59	18	19
Boxelder	1288	...	1061	...	68	42	32	42	35	...	9	...	...
Blackgum	7012	4760	1209	415	218	85	90	137	69	...	23	6	...
White ash	4484	2713	...	915	369	140	160	80	33	39	10	25	...
Other ashes	7174	4433	583	902	371	424	233	84	108	13	11	7	4
Sycamore	1081	...	...	354	356	88	115	25	53	12	24	47	8
Cottonwood	8235	7383	568	267	...	...	...	...	...	...	11	6	...
Willow	4082	3976	...	...	...	...	...	40	50	...	10	7	...
Black walnut	7495	4202	2416	235	125	243	83	110	15	14	40	7	4
Black cherry	3606	3001	591	...	...	...	...	...	14	...	...	...	...
American elm	8805	4986	2236	864	274	220	96	70	15	14	21	9	...
Other elms	71477	53290	11489	4219	842	1022	267	209	82	...	43	15	...
River birch	654	568	...	...	...	...	28	...	18	14	12	9	5
Hackberry	18459	12346	2721	1579	717	464	319	179	77	27	11	17	3
Black locust	5936	3625	1825	329	156	...	...	...	...	...	...	...	...
Other locusts	2305	1175	...	139	653	171	140	...	19	...	...	8	...
Sassafras	34026	32848	591	382	70	98	36	...	...	...	...	...	...
Dogwood	23109	18199	4147	682	81	...	...	...	...	...	...	...	...
Other commercial	4859	1041	1864	1506	305	57	52	16	...	11	...	...	8
Total hardwoods	582610	361396	105824	45795	27421	17425	10130	6410	3763	1875	1108	1328	135
Noncommercial	82861	48151	18651	6321	4400	3031	900	693	366	250	88	10	...
All species	695725	427891	130361	54067	33485	21551	11853	7423	4272	2154	1196	1338	135

Table 33 – *Number of growing-stock trees on timberland by detailed species and diameter class, Northeast Oklahoma, 1986*

Species	All classes	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 & larger
	Diameter class (inches at breast height)										
	Thousand trees										
Shortleaf pine	4446	1080	1137	960	791	320	143	15	...	...	...
Loblolly pine	42	...	...	42	...	...	...	...	...	...	...
Redcedar	479	314	165	...	...	...	...	...	...	...	...
Total softwoods	4966	1394	1302	1002	791	320	143	15	...	...	...
Select white oaks	5491	2231	1383	923	531	211	125	52	...	35	...
Select red oaks	4063	879	1116	947	515	204	158	122	33	55	34
Other white oaks	20989	9562	6683	2630	1125	580	292	71	22	24	...
Other red oaks	18833	5229	5599	3680	1752	1304	653	347	137	122	10
Sweet pecan	294	132	60	54	31	...	...	...	...	15	3
Other hickories	9876	5282	2142	1198	684	363	143	57	...	6	...
Persimmon	289	289	...	...	...	...	...	...	...	...	...
Hard maple	72	...	...	...	27	45	...	...	...	...	...
Soft maple	298	...	...	81	94	25	39	...	59	...	...
Boxelder	110	...	68	42	...	...	...	...	...	...	...
Blackgum	664	251	72	44	90	116	69	...	23	...	...
White ash	700	368	140	90	23	58	...	12	10	...	...
Other ashes	794	187	196	121	113	62	90	13	11	...	...
Sycamore	874	231	356	39	115	25	53	...	24	27	5
Cottonwood	278	267	...	...	...	...	...	...	11	...	...
Willow	90	...	...	...	...	40	50	...	...	...	...
Black walnut	215	...	73	37	33	25	15	14	11	7	...
American elm	773	397	61	180	66	49	...	...	21	...	...
Other elms	2683	1506	425	532	147	37	18	...	9	9	...
Hackberry	1518	504	374	334	178	81	48	...	...	...	...
Black locust	102	102	...	...	...	...	...	...	...	...	...
Other locusts	204	...	127	33	25	...	19	...	...	...	...
Sassafras	416	292	70	54	...	...	...	...	...	...	...
Other commercial	241	196	44	...	...	...	...	...	...	...	...
Total hardwoods	69867	27904	18989	11017	5549	3224	1772	688	370	301	52
All species	74833	29298	20291	12019	6340	3544	1914	703	370	301	52

Table 34 – *Volume of growing-stock trees on timberland by species and diameter class, Northeast Oklahoma, 1986*

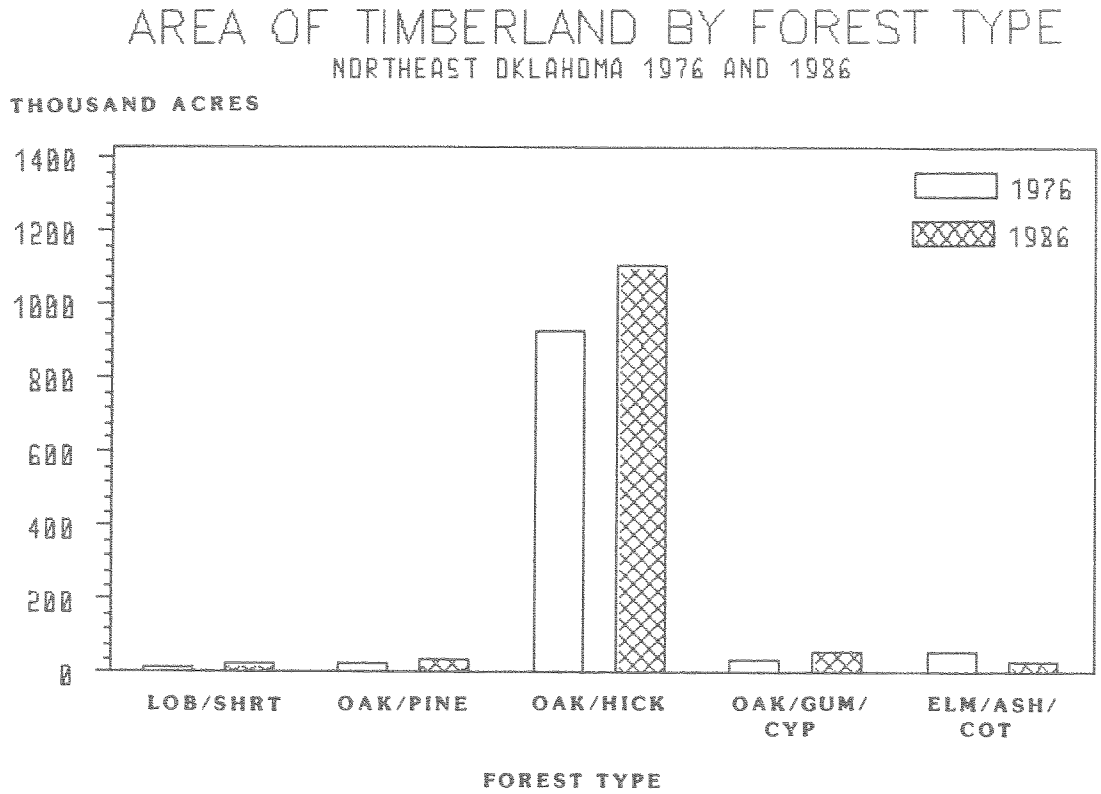
Species	All classes	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 & larger
	Diameter class (inches at breast height)										
	Million cubic feet										
Shortleaf pine	40.8	3.1	5.8	10.0	11.5	6.4	3.6	0.4	...	...	...
Loblolly pine	0.2	...	...	0.2	...	...	...	...	...	...	...
Redcedar	1.2	0.4	0.7	...	...	...	...	...	...	...	...
Total softwoods	42.2	3.6	6.5	10.2	11.5	6.4	3.6	0.4	...	...	...
Select white oaks	38.5	5.6	7.0	8.1	7.2	4.3	2.9	1.5	...	1.9	...
Select red oaks	49.8	1.7	5.8	9.6	8.0	4.3	4.5	4.7	1.8	3.9	5.5
Other white oaks	96.1	19.5	27.6	19.2	11.6	9.3	5.7	1.6	0.6	1.0	...
Other red oaks	147.6	10.9	25.8	29.4	22.3	22.4	15.2	10.0	4.8	5.8	0.9
Sweet pecan	3.2	0.5	0.4	0.4	0.4	...	...	...	...	1.0	0.5
Other hickories	50.8	9.8	10.1	9.2	9.0	7.2	3.1	1.9	...	0.5	...
Persimmon	0.6	0.6	...	...	...	...	...	...	...	...	...
Hard maple	1.1	...	...	...	0.4	0.7	...	...	...	...	...
Soft maple	7.7	...	...	0.8	1.5	0.7	1.2	...	3.5	...	...
Boxelder	0.9	...	0.3	0.6	...	...	...	...	...	...	...
Blackgum	7.6	0.6	0.3	0.3	1.1	2.2	1.9	...	1.1	...	...
White ash	4.6	1.6	0.5	0.5	0.2	1.0	...	0.5	0.4	...	...
Other ashes	9.4	0.5	0.9	1.4	1.5	1.4	2.7	0.6	0.4	...	...
Sycamore	13.9	0.8	2.6	0.5	2.7	0.7	1.8	...	1.1	2.7	1.1
Cottonwood	0.7	0.4	...	...	...	...	...	...	0.3	...	..
Willow	2.5	...	...	...	...	1.0	1.5	...	...	...	...
Black walnut	3.1	...	0.3	0.3	0.4	0.5	0.6	0.2	0.5	0.4	...
American elm	4.9	0.7	0.3	1.2	0.9	0.8	...	...	1.0	...	...
Other elms	13.7	3.1	2.3	4.8	1.9	0.6	0.3	...	0.2	0.5	...
Hackberry	10.6	1.2	1.2	2.8	2.3	1.6	1.5	...	...	...	...
Black locust	0.3	0.3	...	...	...	...	...	...	...	...	...
Other locusts	1.6	...	0.5	0.2	0.3	...	0.5	...	...	...	...
Sassafras	1.2	0.6	0.4	0.3	...	...	...	...	...	...	...
Other commercial	1.0	0.7	0.3	...	...	...	...	...	...	...	...
Total hardwoods	471.4	59.0	86.6	89.5	71.6	58.9	43.4	20.9	15.7	17.7	8.0
All species	513.6	62.6	93.1	99.7	83.1	65.2	47.1	21.4	15.7	17.7	8.0

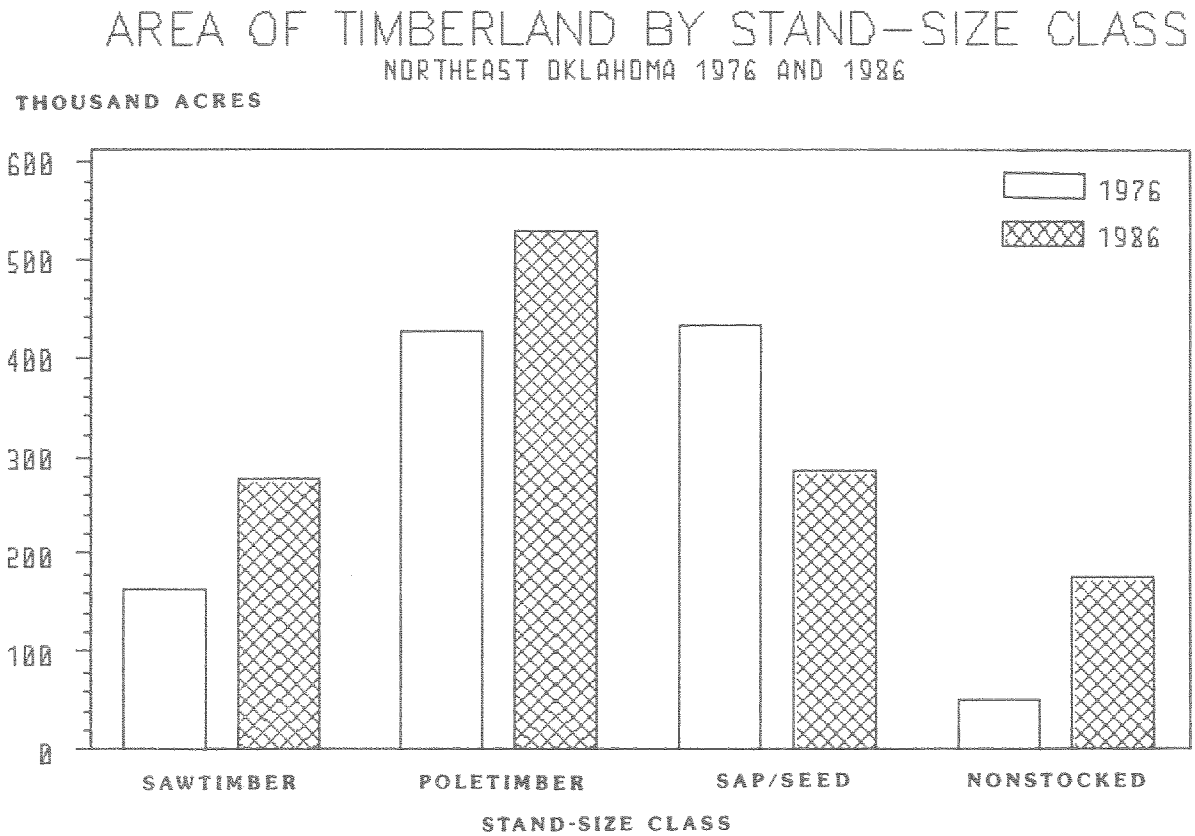
Table 35 — *Volume of growing stock in the saw log portion of sawtimber trees on timberland by detailed species and diameter class, Northeast Oklahoma, 1986*

Species	Diameter class (inches at breast height)								
	All classes	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 & larger
	Million cubic feet								
Shortleaf pine	28.9	8.4	10.6	6.0	3.5	0.4	...	...	...
Loblolly pine	0.1	0.1	...	...	...	...	...	...	...
Total softwoods	29.0	8.6	10.6	6.0	3.5	0.4	...	...	...
Select white oaks	14.5	...	5.6	3.5	2.6	1.2	...	1.5	...
Select red oaks	28.2	...	6.5	3.7	4.0	4.2	1.5	3.4	5.0
Other white oaks	26.2	...	10.0	8.1	5.2	1.4	0.6	0.9	...
Other red oaks	69.2	...	17.7	19.4	13.2	8.8	4.2	5.2	0.8
Sweet pecan	1.5	...	0.3	...	...	...	...	0.7	0.5
Other hickories	18.2	...	7.1	6.2	2.7	1.7	...	0.5	...
Hard maple	1.1	...	0.4	0.7	...	...	...	...	...
Soft maple	5.9	...	1.0	0.6	1.0	...	3.3	...	...
Blackgum	5.8	...	1.0	2.0	1.8	...	1.1	...	...
White ash	1.7	...	0.2	0.9	...	0.4	0.3	...	...
Other ashes	5.5	...	1.3	1.1	2.2	0.6	0.4	...	...
Sycamore	8.9	...	2.0	0.6	1.6	...	1.0	2.7	1.0
Cottonwood	0.2	...	...	...	...	...	0.2	...	...
Willow	1.9	...	...	0.6	1.3	...	...	...	...
Black walnut	1.9	...	0.2	0.4	0.5	0.2	0.4	0.3	...
American elm	1.8	...	0.6	0.5	...	...	0.7	...	...
Other elms	3.2	...	1.6	0.6	0.3	...	0.2	0.5	...
Hackberry	4.2	...	1.7	1.3	1.2	...	...	...	...
Other locusts	0.5	...	0.2	...	0.3	...	...	...	...
Total hardwoods	200.5	...	57.0	50.2	37.8	18.5	13.9	15.8	7.3
All species	229.5	8.6	67.6	56.2	41.3	18.9	13.9	15.8	7.3

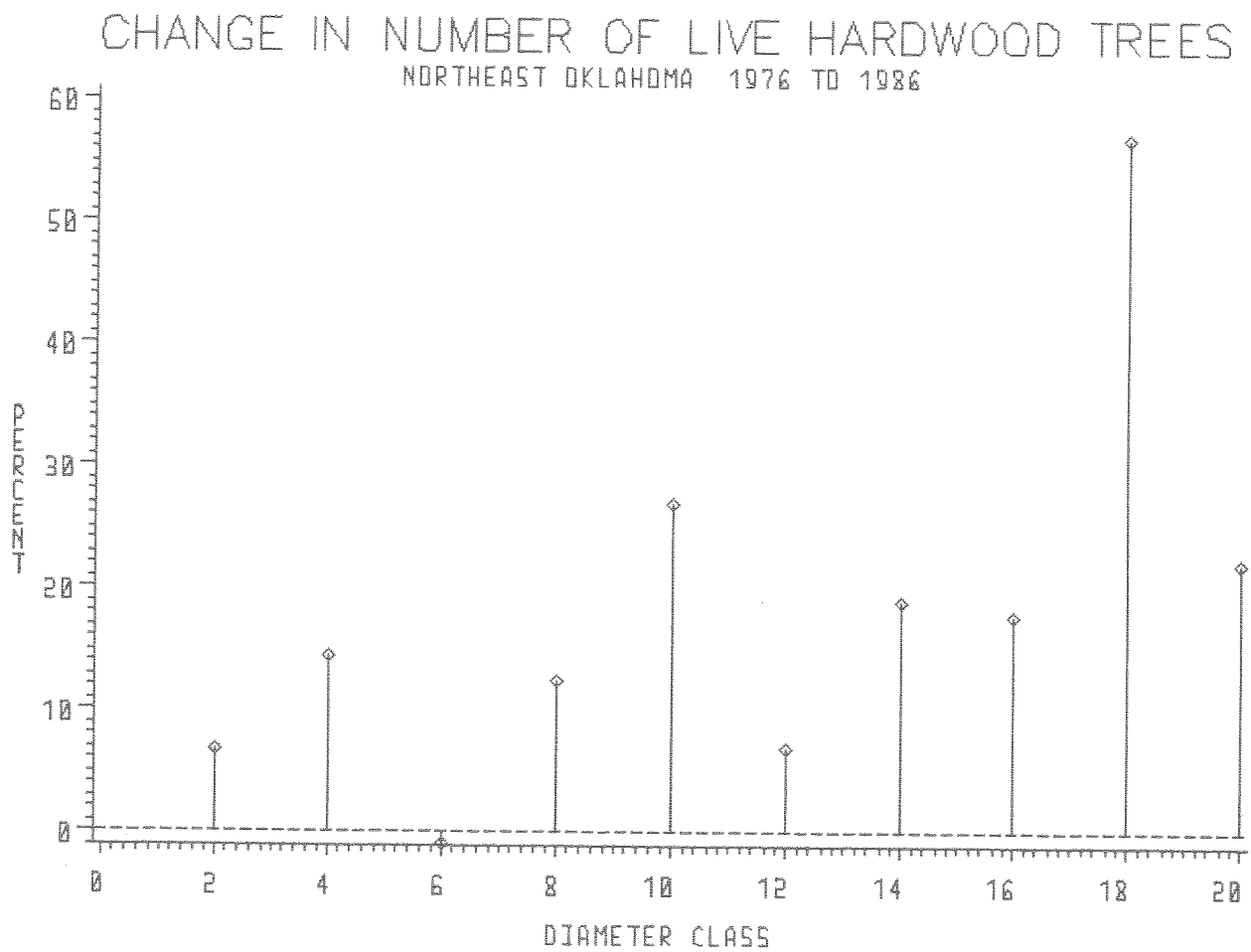
Table 36 – *Volume of timber on timberland by species and class of timber, Northeast Oklahoma, 1986*

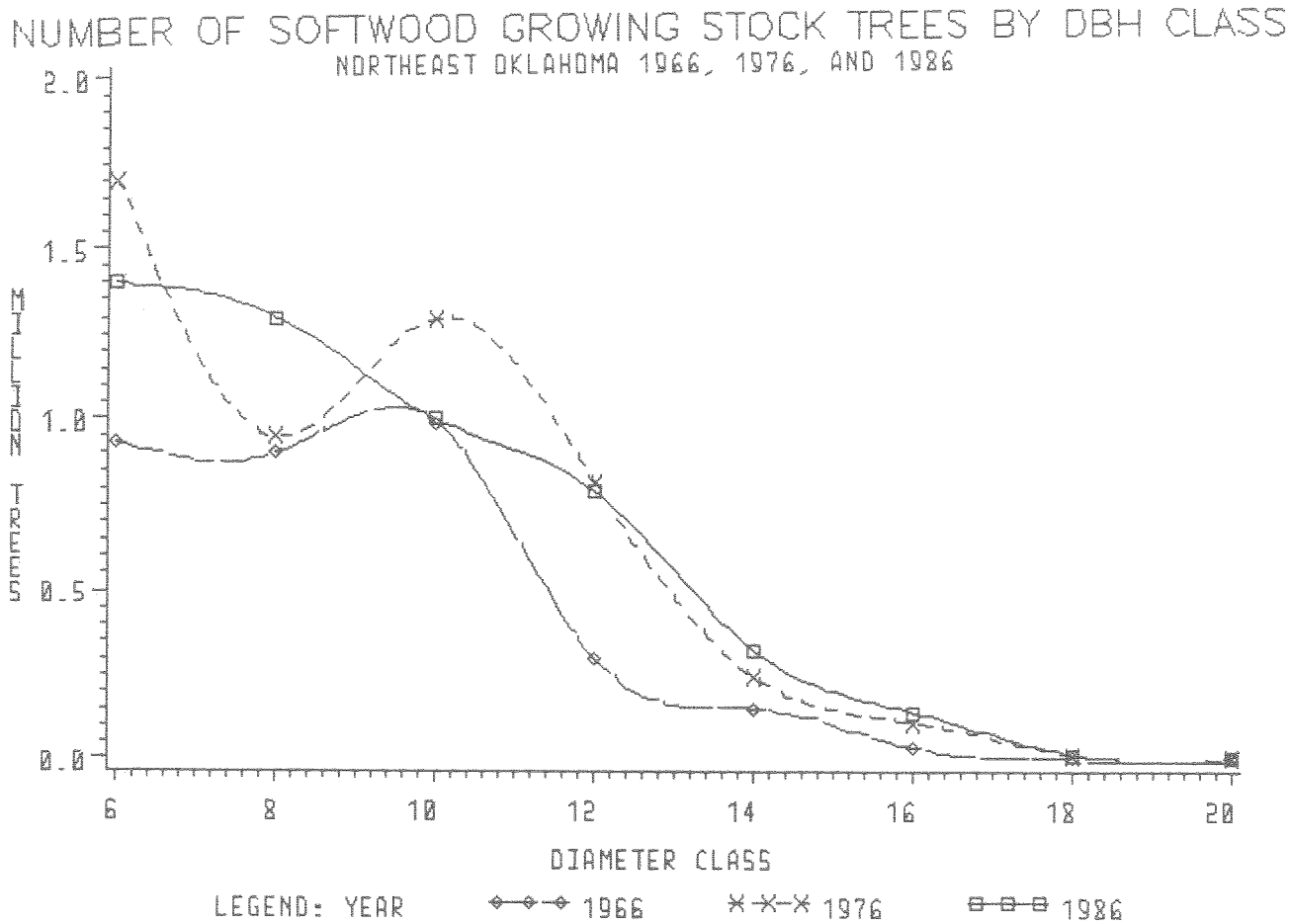
Species	All live	Growing stock	Rough	Rotten
	Million cubic feet			
Shortleaf pine	43.5	40.8	2.3	0.4
Loblolly pine	0.2	0.2	...	...
Redcedar	1.9	1.2	0.7	...
Total softwoods	45.6	42.2	3.0	0.4
Select white oaks	56.6	38.5	13.9	4.2
Select red oaks	63.6	49.8	8.1	5.7
Other white oaks	143.7	96.1	30.6	17.0
Other red oaks	224.1	147.6	41.4	35.1
Sweet pecan	5.1	3.2	1.3	0.6
Other hickories	77.4	50.8	20.8	5.8
Persimmon	0.7	0.6	0.1	...
Hard maple	3.7	1.1	1.9	0.8
Soft maple	13.6	7.7	5.5	0.4
Boxelder	2.6	0.9	1.0	0.7
Blackgum	9.1	7.6	0.4	1.1
White ash	9.9	4.6	4.4	0.8
Other ashes	14.9	9.4	5.0	0.5
Sycamore	16.1	13.9	1.3	0.9
Cottonwood	0.8	0.7	...	0.2
Willow	3.4	2.5	0.8	...
Black walnut	6.6	3.1	2.9	0.6
Black cherry	0.1	...	...	0.1
American elm	7.9	4.9	3.0	...
Other elms	25.8	13.7	11.5	0.6
River birch	1.3	...	0.6	0.7
Hackberry	18.2	10.6	6.1	1.5
Black locust	0.9	0.3	0.2	0.4
Other locusts	5.4	1.6	3.8	...
Sassafras	2.2	1.2	0.5	0.4
Dogwood	0.7	...	0.7	...
Other commercial	4.9	1.0	3.5	0.4
Total hardwoods	719.2	471.4	169.3	78.4
Noncommercial	65.6	...	65.6	...
All species	830.4	513.6	237.9	78.9

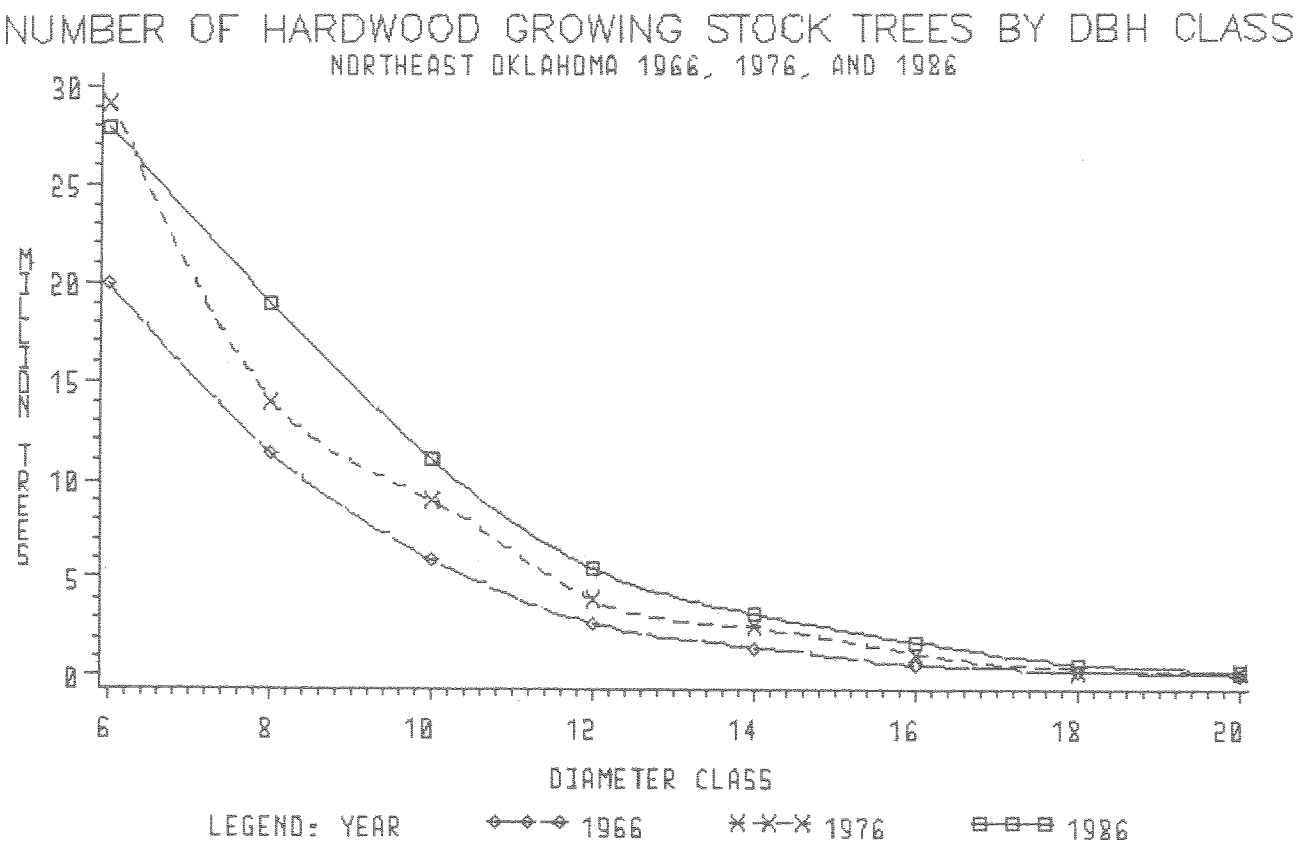

AREA OF TIMBERLAND BY FOREST TYPE
NORTHEAST OKLAHOMA 1976 AND 1986
THOUSAND ACRES
1400
1200
1000
800
600
400
200
0
1976
1986
LOB/SHRT
OAK/PINE
OAK/HICK
OAK/GUM/ CYP
ELM/ASH/ COT
FOREST TYPE


AREA OF TIMBERLAND BY STAND-SIZE CLASS
NORTHEAST OKLAHOMA 1976 AND 1986
THOUSAND ACRES
600
500
400
300
200
100
0
1976
1986
SAWTIMBER
POLETIMBER
SAP/SEED
NONSTOCKED
STAND-SIZE CLASS

CHANGE IN NUMBER OF LIVE SOFTWOOD TREES
NORTHEAST OKLAHOMA 1976 TO 1986
PERCENT
125
100
75
50
25
0
-25
0
2
4
6
8
10
12
14
16
18
20
DIAMETER CLASS

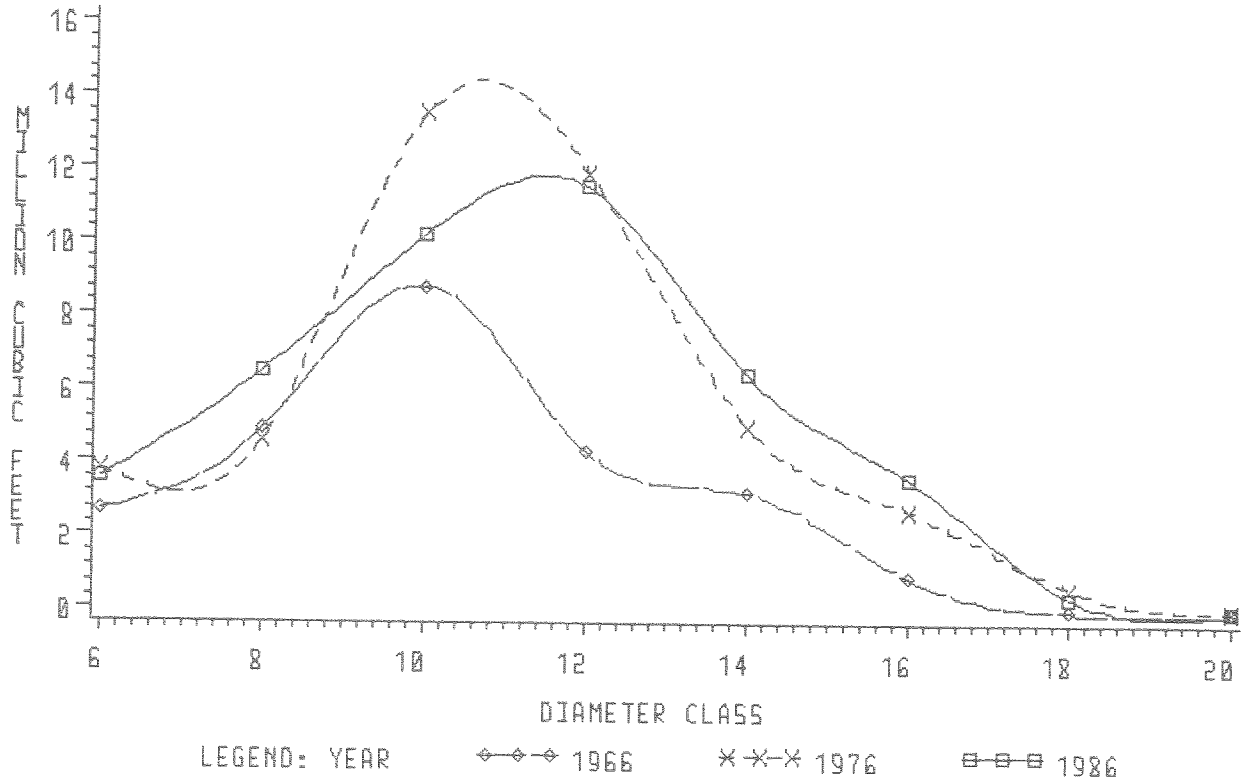

CHANGE IN NUMBER OF LIVE HARDWOOD TREES
NORTHEAST OKLAHOMA 1976 TO 1986
PERCENT
60
50
40
30
20
10
0
0
2
4
6
8
10
12
14
16
18
20
DIAMETER CLASS


NUMBER OF SOFTWOOD GROWING STOCK TREES BY DBH CLASS
NORTHEAST OKLAHOMA 1966, 1976, AND 1986
MILLION TREES
2.0
1.5
1.0
0.5
0.0
6
8
10
12
14
16
18
20
DIAMETER CLASS
LEGEND: YEAR
1966
1976
1986


NUMBER OF HARDWOOD GROWING STOCK TREES BY DBH CLASS
NORTHEAST OKLAHOMA 1966, 1976, AND 1986
MILLION TREES
30
25
20
15
10
5
0
6
8
10
12
14
16
18
20
DIAMETER CLASS
LEGEND: YEAR
1966
1976
1986

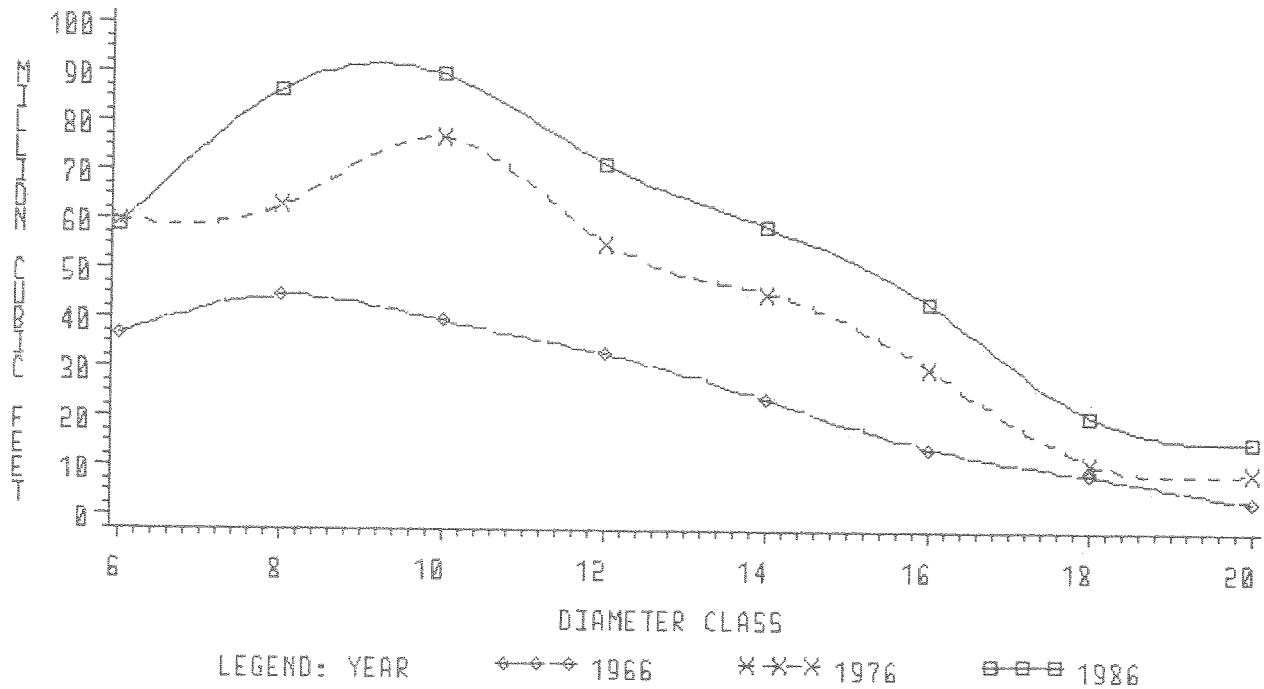
SOFTWOOD GROWING STOCK VOLUME BY DBH CLASS

NORTHEAST OKLAHOMA 1966, 1976 AND 1986

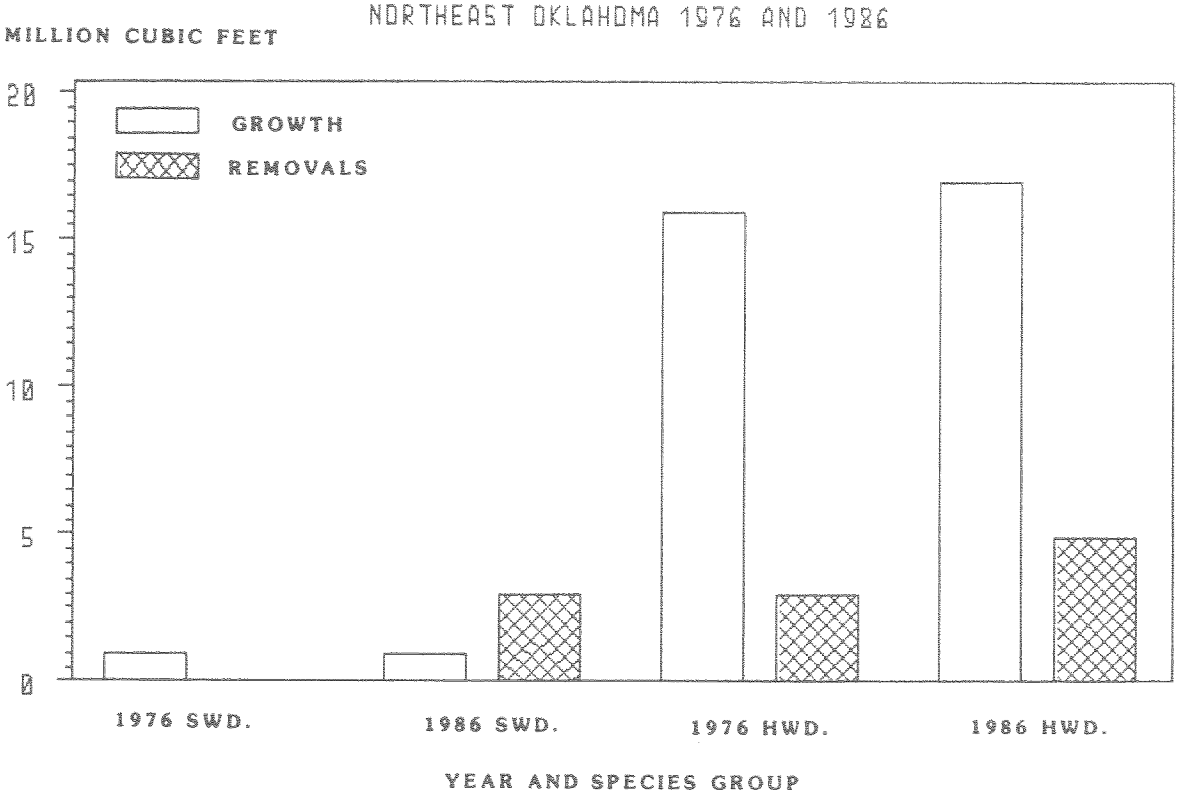


HARDWOOD GROWING STOCK VOLUME BY DBH CLASS

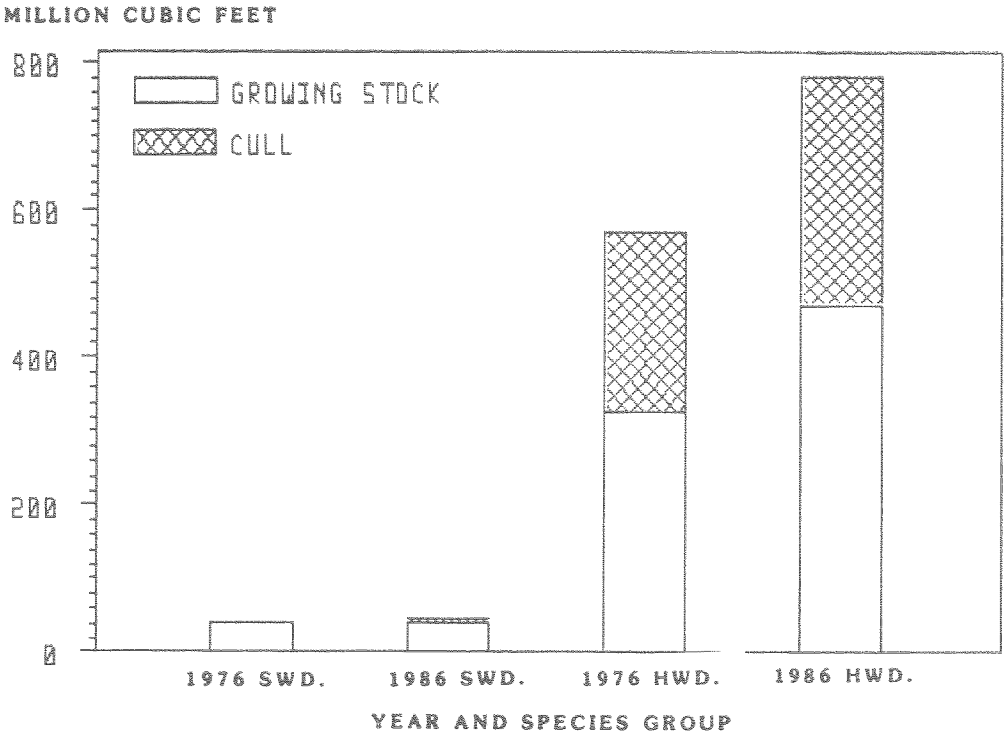
NORTHEAST OKLAHOMA 1966, 1976, AND 1986



GROWTH AND REMOVALS BY SPECIES GROUP
NORTHEAST OKLAHOMA 1976 AND 1986



TIMBER VOLUME BY TREE CLASS AND SPECIES
NORTHEAST OKLAHOMA 1976 AND 1986



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Tabulates forest resource information from a new inventory of the Northeast Unit of Oklahoma.

Additional Keywords: Area, volume, forest type, stand size, ownership.