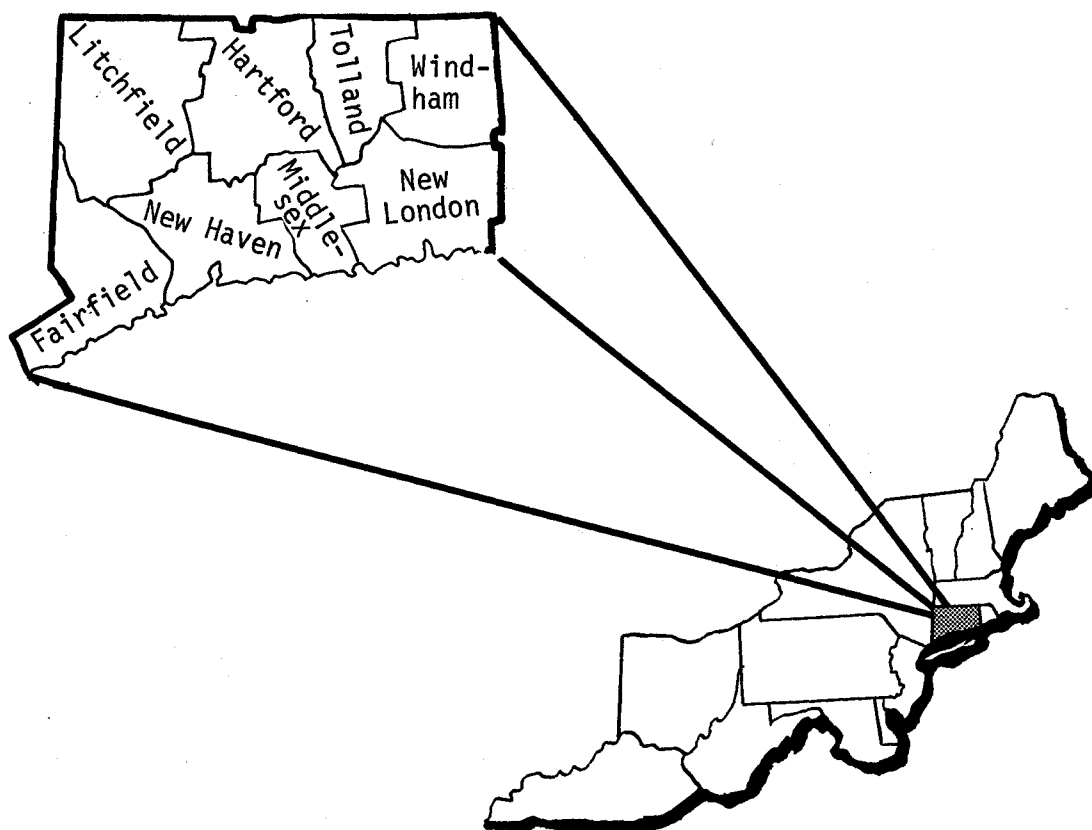


FOREST STATISTICS for CONNECTICUT



USDA FOREST SERVICE RESOURCE BULLETIN NE-44
1976

NORTHEASTERN FOREST EXPERIMENT STATION
FOREST SERVICE, U.S. DEPARTMENT OF AGRICULTURE
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FOREST STATISTICS for CONNECTICUT

by

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THE CONNECTICUT RESURVEY

THIS REPORT contains data from the second inventory of the forest resources of Connecticut. The inventory was completed in 1971 by the Northeastern Forest Experiment Station in cooperation with the Connecticut Department of Environmental Resources. The first inventory of Connecticut was completed in 1952. Because of many differences in standards and measurement techniques, the results of the current inventory are not directly comparable to the initial inventory. The trends in the resource, after the initial data have been adjusted to the resurvey standards, are presented below:

	1953	1972	Change
COMMERCIAL FOREST LAND (thousand acres):	1,973.0	1,805.6	-167.4
GROWING STOCK VOLUME (million cubic feet):			
Softwoods	182.3	357.2	+174.9
Hardwoods	1,321.9	1,994.6	+672.7
Total	1,504.2	2,351.8	+847.6
SAWTIMBER VOLUME (million board feet):			
Softwoods	384.7	1,077.8	+693.1
Hardwoods	2,334.8	3,849.9	+1,515.1
Total	2,719.5	4,927.7	+2,208.2

The inventory statistics reported here were obtained by a sampling procedure that utilizes recent aerial photography, the partial re-measurement of ground samples from the initial inventory, and the establishment of new ground-sample locations. In Connecticut this consisted of the remeasurement of 146 plots, the interpretation of 13,000 points on aerial photographs into land-use and cubic-foot volume classes, and the location and establishment of 349 on-the-ground measurement locations as a subsample of the photo points. The data thus collected were summarized according to the Sampling with Partial Replacement (SPR) design, using the FINSYS computer system developed by the Northeastern Forest Experiment Station.

The inventory was designed to estimate resource data for the State as a whole. However, estimates for individual counties are also available, based on the photo-plot data for the particular county, expanded by the on-the-ground measurement subsample for a photo unit. Since this procedure assumes that certain attributes from the ground plots are homogeneous across county boundaries, in Connecticut every attempt has been made to develop photo units that are homogeneous for the attributes of interest. Nevertheless, the user of county data should recognize the limited and

variable accuracy of the individual county estimates.

The reader may wish to consult other publications about this resurvey. *THE FOREST RESOURCES OF SOUTHERN NEW ENGLAND* (Resource Bulletin NE-36, 1974, by Neal P. Kingsley) provides an analysis and interpretation of the current forest resource of this region along with an evaluation of the trends since the first inventory. *PRIMARY WOOD-PRODUCT INDUSTRIES OF SOUTHERN NEW ENGLAND—1971* (Resource Bulletin NE-30, by James T. Bones) reports on the complete canvass of the primary wood manufacturers and analyzes the trends in industrial wood output since 1952. *THE FOREST-LAND OWNERS OF SOUTHERN NEW ENGLAND* (Resource Bulletin NE-41, 1976, by Neal P. Kinsley) reports on a canvass of forest-land owners in the three southern New England states and analyzes their ownership objectives, harvesting practices, and socioeconomic characteristics.

THE FOREST RESOURCE PICTURE

Although Connecticut is located in the center of the East Coast metropolitan belt, a sizable proportion of its area is commercial forest land. When the first forest survey of the State's timber resources was completed in 1952, almost 2 million acres (63 percent) of the land area was classified as commercial forest. This was more than double the acreage of forest land that had existed 100 years earlier.¹ The upward trend has now reversed. The recently completed re-inventory of the forest resources indicates that the State's forest land decreased to 1,806 thousand acres, or 58 percent of the land area.

The distribution of acreage among the major forest types has changed between surveys. More acreage is in the softwood forest type than in 1952. In 1952 this type occupied 7 percent; in the resurvey 12 percent of the forest area was classified as softwood. The oak-hickory type is still the predominant forest type, even though the proportion decreased

from 65 percent to about 40 percent of the commercial forest area.

Although the forest-land base has been reduced in the period between surveys, the volume of timber has risen substantially to an average of 1,300 cubic feet per acre. The current timber-volume data indicate that the volume of growing stock has increased to 2,352 million cubic feet, while the sawtimber volume has increased to 4,928 million board feet.

Northern red oak maintained its position as the predominant species with a net volume of 421 million cubic feet. The soft maples rank second in cubic-foot volume with 404 million, followed by the other red oaks with 272 million, and white oak with 186 million.

Softwood species currently make up 15 percent of the total net cubic-foot volume, approximately the same proportion as in 1952. Within this group, hemlock continued as the leading species with over 160 million net cubic feet. However, the growing-stock volume of red and white pines combined—173 million cubic feet—now exceeds that of hemlock. Hemlock still leads in sawtimber volume with 536 million board feet.

The results of the resurvey show that the current net growth greatly exceeds removals. The average annual net growth for the 19-year period is 61.4 million cubic feet, and the average annual removal is 16.8 million cubic feet. Softwood growing-stock removal is 18 percent of the average annual net growth for softwoods, and hardwood growing-stock removal is almost 30 percent of the average annual net growth for hardwoods. The average annual net growth of sawtimber is 162.0 million board feet, while the average annual removal is 45.8 million board feet. Removal of softwood sawtimber is slightly less than 15 percent of the average annual net growth of softwoods, and removal of hardwood sawtimber is 33 percent of the average annual net growth for hardwoods.

The soft maples ranked first in average annual net growth, with almost 12 million cubic feet. They were second in volume of average annual timber removal, a total of 2.7 million cubic feet. Northern red oak was second in average annual net growth, 11.6 million cubic feet, but first in removal with 4.0 million cubic feet.

¹ Griswold and Ferguson. The timber resources of Connecticut. USDA For. Serv. Northeast. For. Exp. Stn. 39 p. 1957.

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DEFINITION OF TERMS

Land Area Classes

Land area.—(a) Bureau of the Census. The area of dry land and land that is temporarily or partly covered by water, such as marshes, swamps, and river flood plains; streams, sloughs, estuaries, and canals that are less than $\frac{1}{8}$ statute mile in width; and lakes, reservoirs, and ponds that are less than 40 acres in area. (b) Forest Survey. The same as the Bureau of the Census, except that the minimum width of streams, etc. is 120 feet and the minimum size of lakes etc. is 1 acre.

Forest land.—Land that is at least 16.7 percent stocked (contains at least 7.5 square feet of basal area) by forest trees of any size, or that formerly had such tree cover and is not currently developed for nonforest use. (Forest trees are woody plants that have a well-developed stem and usually are more than 12 feet in height at maturity.) The minimum area for classification of forest land is 1 acre.

Commercial forest land.—Forest land that is producing or capable of producing crops of industrial wood (more than 20 cubic feet per acre per year) and is not withdrawn from timber utilization. (Industrial wood: all roundwood products, except fuelwood.)

Ownership Classes

Federal.—Lands (other than National Forests) that are administered by Federal agencies.

State.—Lands that are owned by the state or leased to a state for 50 years or more.

County and municipal.—Lands that are owned by counties and local public agencies or municipalities or leased to them for 50 years or more.

Forest industry.—Lands that are owned by companies or individuals operating wood-using plants.

Miscellaneous private.—Privately owned lands other than forest-industry and farmer-owned lands.

Farmer-owned.—Lands that are owned by farm operators, whether part of the farmstead or not. Excludes land leased by farm operators from non-farm owners.

Stand-Size Classes

Stand.—A growth of trees (see definitions under "Tree Classes") on a minimum of 1 acre of forest land that is at least 16.7 percent stocked by forest trees of any size.

Sawtimber stands.—Stands that are at least 16.7 percent stocked with growing-stock trees, with half or more of total stocking in sawtimber or poletimber trees, and with sawtimber stocking at least equal to poletimber stocking.

Poletimber stands.—Stands that are at least 16.7 percent stocked with growing-stock trees of which half or more of this stocking is in poletimber and/or sawtimber trees and in which poletimber stocking exceeds that of sawtimber.

Sapling-seedling stands.—Stands that are at least 16.7 percent stocked with growing-stock trees of which more than half of the stocking is sapling and/or seedlings.

Nonstocked areas.—Commercial forest land that is less than 16.7 percent stocked with growing-stock trees.

Tree Classes

Growing-stock trees.—Live trees of commercial species that are classified as sawtimber, poletimber, saplings, and seedlings; that is, all live trees of commercial species except rough and rotten trees.

Rotten trees.—Live trees of commercial species that do not contain at least one 12-foot sawlog or two nontiguous sawlogs, each 8 feet or longer, now or prospectively, and do not meet regional specifications for freedom from defect primarily because of rot; that is, when more than 50 percent of the cull volume in a tree is rotten.

Rough trees.—(a) The same as above, except that rough trees do not meet regional specifications for freedom from defect primarily because of roughness or poor form, and (b) all live trees that are of non-commercial species.

Forest Types

Forest type.—A classification of forest land based upon the species forming a plurality of basal area of live trees. The many local forest types in the Northeast were combined into the following major forest types:

White pine-red pine-hemlock.—Forests in which eastern white pine, red pine, or hemlock, singly or in combination, make up a plurality of the stocking. (Common associates include aspen, birch, and maple.)

Spruce-fir.—Forests in which spruce or true firs, singly or in combination, comprise a plurality of the stocking. (Common associates include white cedar, tamarack, maple, birch, and hemlock.)

Pitch pine-eastern redcedar.—Forests in which pitch pine or eastern redcedar, singly or in combination, make up a plurality of the stocking. (Common associates include oak and hickory.)

Oak-pine.—Forests in which oaks or hickory, singly or in combination, make up a plurality of the stocking, but in which pitch pine and/or eastern redcedar make up 25 to 50 percent of the stocking.

Oak-hickory.—Forests in which oaks or hickory, singly or in combination, make up a plurality of the stocking, except where pitch pine and/or eastern redcedar make up 25 or 50 percent, in which case the stand would be classified oak-pine. (Common associates include yellow-poplar, elm, and red maple.)

Elm-ash-red maple.—Forests in which elm, ash, or red maple, singly or in combination, make up a plurality of the stocking. (Common associates include beech and sugar maple.)

Maple-beech-birch.—Forests in which sugar maple, beech, or yellow birch, singly or in combination, make up a plurality of the stocking. (Common associates include sweet birch, black cherry, hemlock, and white pine.)

Class of Timber

Sawtimber trees.—Live trees of commercial species, (a) that are of the following minimum diameters at breast height—softwoods 9.0 inches and hardwoods 11.0 inches, and (b) that contain at least one 12-foot or two noncontiguous 8-foot merchantable sawlogs and that meet regional specifications for freedom from defect.

Poletimber trees.—Live trees of commercial species that meet regional specifications of soundness and form, and are at least 5.0 inches dbh but are smaller than sawtimber size.

Saplings.—Live trees of commercial species that are 1.0 to 5.0 inches dbh and of good form and vigor.

Seedlings.—Live trees of commercial species that are less than 1.0 inch dbh and are expected to survive.

Timber Measurement and Volume

Growing-stock volume.—Net volume, in cubic feet, of live growing-stock trees that are 5.0 inches dbh and larger, 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. Net volume equals gross volume less deduction for rot and/or sweep and crook.

Sawtimber volume.—Net volume in board feet, International 1/4-inch rule, of merchantable sawlogs in live sawtimber trees. Net volume equals gross volume less deductions for rot, sweep, and other defects that affect use for lumber.

Annual Net Growth and Timber Removals

Average annual net growth of growing stock.—The change (resulting from natural causes) in volume of sound wood in sawtimber and poletimber trees during the period between surveys, divided by the length of the period. (Components of annual net growth of growing stock include the increment in net volume of trees present at the beginning of the period and surviving to its end, plus net volume of trees reaching poletimber size during the period, minus the net volume of trees that died during the period, minus the net volume of trees that became rough or rotten trees during the period, cull increment.)

Average annual growing-stock removals.—The net cubic-foot volume of growing-stock trees removed by harvesting or killed in logging, cultural operations such as timber-stand improvement, and land-clearing; or changes in land use during the period between surveys, converted to an annual basis.

Average annual net growth of sawtimber.—The change (resulting from natural causes) in net board-foot volume of sawtimber during the period between surveys, divided by the length of the period. (Components of annual net growth of sawtimber include the increment in net volume of sawtimber trees

present at the beginning of the period and surviving to its end, plus the net volume of trees reaching sawtimber size during the period, minus the net volume of sawtimber trees that died during the period, minus the net volume of sawtimber trees that became rough or rotten trees during the period between surveys, cull increment.)

Average annual sawtimber removals.—The net board-foot volume of sawtimber trees removed by harvesting or killed in logging, cultural operations such as timber-stand improvement, and land-clearing; or changes in land use during the period between surveys, converted to an annual basis.

Annual removals trend-level.—The estimated removals of growing stock or sawtimber for a specific year that are consistent with the trend of removals during the period between surveys and with the current inventory.

Logging residues.—The unused growing-stock volume of trees cut for products and the total growing-stock volume of trees destroyed in the course of logging but not removed for products.

Other removals.—The growing-stock volume of trees that were removed from the inventory and not used for products, in cultural operations (weeding, thinning, etc.), land-clearing, and reclassification of some commercial forest land as noncommercial forest land.

Plant byproducts.—Wood products such as slabs, edgings, and veneer cores that are obtained incidental to the production of timber products and are utilized in the manufacture of other timber products. (Bark is not included.)

Plant residues.—Wood material produced incidental to the production of timber products but not utilized.

Roundwood products.—Logs, bolts, or other round sections cut from growing stock or nongrowing stock for industrial or nonindustrial uses.

Timber products.—Roundwood products and plant byproducts from all sources.

Timber removals.—The growing-stock volume of trees removed from the inventory for roundwood products, plus logging residues and other removals.

Table 1.--Area by land classes, Connecticut, 1972

Land area	Area	
	<u>Thousand acres</u>	<u>Percent</u>
Forest land:		
Commercial	1,805.6	58
Productive-reserved	15.4	1
Christmas-tree plantation	15.1	(a/)
Unproductive	24.7	1
Total forest land	1,860.8	60
Nonforest:		
Cropland <u>b/</u>	232.4	7
Pasture <u>b/</u>	71.8	2
Other <u>c/</u>	951.8	31
Total nonforest land	1,256.0	40
Total area <u>d/</u>	3,116.8	100

a/ Less than 0.5 percent.

b/ Source: 1969 and 1964 Census of Agriculture. Total cropland includes cropland used for pasture. Pasture total based upon ratios developed from the 1964 census report. Data extrapolated to 1972.

c/ Includes swampland, industrial and urban areas, other nonforest land, and 24,200 acres classed as water by Forest Survey standards but defined by the Bureau of the Census as land.

d/ Source: United States Bureau of the Census, Areas of Connecticut: 1960 (May 1967).

Table 2.--Area of commercial forest land, by
ownership classes, Connecticut, 1972

Ownership	Area ^{a/}	
	<u>Thousand acres</u>	<u>Percent</u>
Other federal	2.4	(b/)
State	119.8	7
County and municipal	24.4	1
Total public	146.6	8
Farmer owned:		
Corporate	10.4	1
Individual	117.9	6
Miscellaneous private:		
Corporate	162.3	9
Other <u>c/</u>	1,368.4	76
Total private	1,659.0	92
All ownerships	1,805.6	100

a/ Estimates of area in each private ownership class are based upon the forest-land ownership study.

b/ Less than 0.5 percent.

c/ Includes acreage owned by business partnerships and organizations such as churches, Boy Scouts of America, and associations.

Table 3.--Area of commercial forest land, by stand-size, stand-volume, and ownership classes, Connecticut, 1972

(In thousands of acres)

Stand-size and stand-volume class	All ownerships	Other public	Farmer and other
BY STAND-SIZE CLASSES			
Sawtimber stands	631.0	64.8	566.2
Poletimber stands	600.1	55.4	544.7
Sapling-seedling stands	574.5	26.4	548.1
All classes ^{a/}	1,805.6	146.6	1,659.0
BY STAND-VOLUME PER ACRE CLASSES ^{b/}			
Less than 1,500	564.4	40.1	524.3
1,500 to 5,000	953.3	79.9	873.4
More than 5,000	287.9	26.6	261.3
All classes	1,805.6	146.6	1,659.0

^{a/} No nonstocked areas in Connecticut.

^{b/} International 1/4-inch rule.

Table 4.--Area of commercial forest land, by stocking classes
based on selected stand components, Connecticut, 1972

(In thousands of acres)

Stocking class <u>a/</u> (percent)	Stocking classified in terms of--				
	All trees	Growing-stock trees			Rough and rotten trees
		Total	Desirable	Acceptable	
Overstocked:					
160	--	--	--	--	--
150 to 160	47.6	0.9	--	--	--
140 to 150	62.8	45.0	--	0.8	--
130 to 140	294.7	100.0	--	127.4	--
Total	405.1	145.9	--	128.2	--
Fully stocked:					
120 to 130	346.7	128.2	--	48.3	--
110 to 120	323.6	201.9	--	165.7	--
100 to 110	337.5	364.7	--	252.5	--
Total	1,007.8	694.8	--	466.5	--
Medium stocked:					
90 to 100	200.2	338.4	--	374.8	0.8
80 to 90	62.0	303.1	--	355.0	--
70 to 80	45.4	111.8	0.8	224.0	.8
60 to 70	27.8	64.8	--	87.3	--
Total	335.4	818.1	.8	1,041.1	1.6
Poorly stocked:					
50 to 60	29.9	31.8	16.8	37.8	--
40 to 50	14.3	28.8	2.6	45.7	93.2
30 to 40	13.1	58.0	52.0	58.1	146.6
20 to 30	--	28.2	71.2	28.2	473.7
10 to 20	--	--	320.0	--	484.2
Less than 10	--	--	1,342.2	--	606.3
Total	57.3	146.8	1,804.8	169.8	1,804.0
All classes	1,805.6	1,805.6	1,805.6	1,805.6	1,805.6

a/ Fully stocked stands are considered to be 75 to 100 square feet
of basal area.

Table 5.--Area of commercial forest land, by ownership, potential site productivity, and area-condition classes, Connecticut, 1972

(In thousands of acres)

Growth-per-acre and area-condition class	All ownerships	Other public	Farmer and other
(cubic feet)	BY GROWTH-PER-ACRE CLASSES		
120 to 165	45.5	5.8	39.7
85 to 120	196.3	15.0	181.3
50 to 85	618.1	36.0	582.1
Less than 50	945.7	89.8	855.9
All classes	1,805.6	146.6	1,659.0
	BY AREA-CONDITION CLASSES ^{a/}		
Class 10-40	0.8	0.8	--
Class 50	594.4	44.3	550.1
Class 60	1,039.5	87.5	952.0
Class 70	170.9	14.0	156.9
All classes	1,805.6	146.6	1,659.0

^{a/} Class 10-40.--Areas medium to fully stocked with desirable trees.

Class 50.--Areas poorly stocked with desirable trees, but fully stocked with growing-stock trees.

Class 60.--Areas poorly stocked with desirable trees, but with medium to full stocking of growing-stock trees.

Class 70.--Areas poorly stocked with desirable trees, and poorly stocked with growing-stock trees.

Table 6.--Area of commercial forest land, by forest types, ownership classes, and stand-size classes, Connecticut, 1972

(In thousands of acres)

	Ownership and stand-size classes	White pine- red pine- hemlock	Spruce- fir	Pitch pine- eastern redcedar	Oak- pine	Oak- hickory	Elm-ash- red maple	Maple- beech- birch	Aspen- birch	Total
	BY OWNERSHIP CLASSES									
12 Other public		19.2	.9	2.0	4.6	76.0	26.2	17.4	.3	146.6
Farmer and other		161.0	15.0	27.2	98.5	654.1	389.2	287.0	27.0	1,659.0
	All ownerships	180.2	15.9	29.2	103.1	730.1	415.4	304.4	27.3	1,805.6
	BY STAND-SIZE CLASSES									
Sawtimber stands		139.9	--	--	29.7	289.5	92.2	79.7	--	631.0
Poletimber stands		13.4	--	14.3	--	319.3	160.3	92.8	--	600.1
Sapling-seedling stands		26.9	15.9	14.9	73.4	121.3	162.9	131.9	27.3	574.5
	All stands	180.2	15.9	29.2	103.1	730.1	415.4	304.4	27.3	1,805.6

Table 7.--Area of commercial forest land by local forest types and major forest types, Connecticut, 1972

(In thousands of acres)

Local forest type and major forest type	Acres	
	Local	Major
White pine-red pine-hemlock:		
White pine	60.1	--
Red pine	37.5	--
White pine-hemlock	26.0	--
Hemlock	56.6	--
Total	--	180.2
Spruce-fir:		
Northern white-cedar	14.9	--
Tamarack	1.0	--
Total		15.9
Pitch pine-eastern redcedar:		
Eastern redcedar	15.0	--
Pitch pine	14.2	--
Total		29.2
Oak-pine:		
White pine-red oak-white oak	72.6	--
Eastern redcedar-hardwood	13.9	--
Other oak-pine	16.6	--
Total		103.1
Oak-hickory:		
Post, black, or bear oak	113.9	--
Chestnut oak	40.6	--
White oak-red oak-hickory	150.5	--
White oak	104.8	--
Northern red oak	226.8	--
Yellow-poplar--white oak--red oak	48.4	--
Sweetgum--yellow-poplar	28.2	--
Mixed hardwoods	16.9	--
Total		730.1
Elm-ash-red maple:		
Black ash-elm-red maple	415.4	--
Total		415.4
Maple-beech-birch:		
Sugar maple-beech-yellow birch	276.2	--
Black cherry	28.2	--
Total		304.4
Aspen-birch:		
Aspen	27.3	27.3
All forest types	1,805.6	1,805.6

Table 8 .--Area of noncommercial forest land, by
forest types, Connecticut, 1972

(In thousands of acres)

Forest type	All areas	Productive- reserved areas	Unproductive areas
White pine-red pine-hemlock	2.0	2.0	--
Spruce-fir	17.0	15.2	1.8
Pitch pine-eastern redcedar	.2	.2	--
Oak-pine	.5	.5	--
Oak-hickory	9.8	8.0	1.8
Elm-ash-red maple	23.9	2.8	21.1
Maple-beech-birch	1.8	1.8	--
All types	55.2	30.5	24.7

Table 9.--Number of trees on commercial forest land by species groups, tree classes, and diameter classes, Connecticut, 1972

(In thousands of trees)

Dbh class (inches)	Softwoods			Hardwoods		
	Growing- stock trees	Rough and rotten trees	Total	Growing- stock trees	Rough and rotten trees	Total
Saplings:						
1.0 to 2.9	37,247	11,260	48,507	241,859	235,084	476,943
3.0 to 4.9	17,519	3,277	20,796	112,100	50,454	162,554
Total	54,766	14,537	69,303	353,959	285,538	639,497
Poletimber:						
5.0 to 6.9	12,442	1,052	13,494	87,752	12,799	100,551
7.0 to 8.9	7,674	227	7,901	59,754	2,912	62,666
9.0 to 10.9	--	--	--	37,249	2,304	39,553
Total	20,116	1,279	21,395	184,755	18,015	202,770
Small sawtimber:						
9.0 to 10.9	5,438	918	6,356	--	--	--
11.0 to 12.9	3,064	458	3,522	18,952	2,271	21,223
13.0 to 14.9	1,961	186	2,147	10,588	800	11,388
Total	10,463	1,562	12,025	29,540	3,071	32,611
Large sawtimber:						
15.0 to 16.9	1,258	45	1,303	5,512	457	5,969
17.0 to 18.9	582	34	616	2,851	280	3,131
19.0 to 20.9	323	23	346	1,383	98	1,481
21.0 to 28.9	345	47	392	1,037	220	1,257
29.0 and larger	48	7	55	77	54	131
Total	2,556	156	2,712	10,860	1,109	11,969
All classes	87,901	17,534	105,435	579,114	307,733	886,847

Table 10.--Number of growing stock trees on commercial forest land, by species and diameter classes,
Connecticut, 1972

(In thousands of trees)

Species	All classes	Diameter class (inches at breast height)									
		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+
White pine	8,815	2,668	2,554	1,520	484	606	316	327	191	121	28
Hemlock	14,161	5,173	2,625	2,264	1,879	781	808	255	132	224	20
Other softwoods	10,159	4,601	2,495	1,654	701	574	134	--	--	--	--
All softwoods	33,135	12,442	7,674	5,438	3,064	1,961	1,258	582	323	345	48
Select white oaks	22,988	9,082	5,589	3,984	1,950	1,444	304	415	155	65	--
Select red oaks	31,876	7,112	6,830	7,441	3,993	2,721	1,883	963	533	376	24
Other white oaks	7,117	4,295	1,287	805	247	353	62	41	27	--	--
Other red oaks	20,961	4,368	4,854	4,175	3,397	2,003	1,163	600	291	110	--
Hickory	12,956	4,620	4,586	1,642	1,416	236	192	65	103	86	10
Sugar maple	9,094	2,177	3,373	1,916	750	393	227	132	24	91	11
Soft maples	62,889	33,273	16,180	8,128	2,857	1,285	755	177	105	105	24
Yellow birch	5,509	3,538	1,218	214	204	242	5	67	--	21	--
Sweet birch	21,408	9,129	6,920	3,040	1,433	484	237	62	81	22	--
Paper birch	2,689	1,338	805	353	125	59	5	4	--	--	--
Beech	4,001	1,427	1,018	831	292	291	89	35	--	18	--
White ash	11,646	3,634	3,128	2,495	1,188	670	336	105	34	56	--
Black cherry	4,175	1,347	1,287	897	441	56	82	65	--	--	--
Aspen	1,960	318	1,094	481	61	6	--	--	--	--	--
Elms	2,151	1,104	359	501	146	--	41	--	--	--	--
Other hardwoods	3,735	990	1,226	346	452	345	131	120	30	87	8
All hardwoods	225,155	87,752	59,754	37,249	18,952	10,588	5,512	2,851	1,383	1,037	77
All species	258,290	100,194	67,428	42,687	22,016	12,549	6,770	3,433	1,706	1,382	125

Table 11.--Net volume of timber on commercial forest land,
by class of timber, softwoods and hardwoods,
Connecticut, 1972

(In millions of cubic feet)

Class of timber	All species	Softwoods	Hardwoods
Sawtimber trees:			
Sawlog portion	1,003.0	228.0	775.0
Upper-stem portion	217.0	28.2	188.8
All sawtimber trees	1,220.0	256.2	963.8
Poletimber trees	1,131.8	101.0	1,030.8
All growing-stock trees	2,351.8	357.2	1,994.6
Rough trees	117.3	31.0	86.3
Rotten trees	47.3	2.1	45.2
Total, all timber	2,516.4	390.3	2,126.1

Table 12.--Net volume of growing stock and sawtimber on commercial forest land, by ownership classes, stand-size classes, and forest types, softwoods and hardwoods, Connecticut, 1972

Ownership, stand-size, and forest type	Growing stock (million cubic feet)			Sawtimber (million board feet) ^{a/}		
	All species	Softwoods	Hardwoods	All species	Softwoods	Hardwoods
BY OWNERSHIP CLASSES						
Other public	211.8	42.2	169.6	414.4	112.0	302.4
Farmer and other	2,140.0	315.0	1,825.0	4,513.3	965.8	3,547.5
All ownerships	2,351.8	357.2	1,994.6	4,927.7	1,077.8	3,849.9
BY STAND-SIZE CLASSES						
Sawtimber stands	1,141.9	275.1	866.8	3,129.4	903.9	2,225.5
Pole timber stands	834.2	44.9	789.3	1,106.9	113.2	993.7
Sapling-seedling stands	375.7	37.2	338.5	691.4	60.7	630.7
All classes	2,351.8	357.2	1,994.6	4,927.7	1,077.8	3,849.9
BY FOREST TYPES						
White pine-red pine-hemlock	405.8	246.4	159.4	1,158.3	764.2	394.1
Spruce-fir	10.5	4.9	5.6	6.7	1.0	5.7
Pitch pine-eastern redcedar	16.5	11.2	5.3	30.8	21.8	9.0
Oak-pine	75.5	11.5	64.0	154.8	18.8	136.0
Oak-hickory	995.3	32.1	963.2	1,976.4	119.3	1,857.1
Elm-ash-red maple	467.0	30.9	436.1	831.3	91.0	740.3
Maple-beech-birch	374.5	20.2	354.3	751.8	61.7	690.1
Aspen-birch	6.7	--	6.7	17.6	--	17.6
All types	2,351.8	357.2	1,994.6	4,927.7	1,077.8	3,849.9

^{a/} International 1/4-inch rule.

Table 13.--Net volume of growing stock on commercial forest land, by species and diameter classes,
Connecticut, 1972

(In millions of cubic feet)

Species	All classes	Diameter class (inches at breast height)									
		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+
White pine	114.6	14.1	17.5	16.8	7.8	13.9	9.4	13.1	9.8	8.4	3.8
Hemlock	162.0	20.6	16.2	22.1	26.2	16.5	23.3	10.5	7.2	16.4	3.0
Other softwoods	80.6	14.6	18.0	19.7	11.5	12.8	4.0	--	--	--	--
All softwoods	357.2	49.3	51.7	58.6	45.5	43.2	36.7	23.6	17.0	24.8	6.8
Select white oaks	185.5	24.0	28.6	36.3	27.5	30.4	9.3	16.5	8.3	4.6	--
Select red oaks	421.0	26.6	40.6	72.7	62.4	62.2	58.3	39.7	28.5	26.8	3.2
Other white oaks	47.4	13.8	7.4	8.6	4.4	8.3	1.8	1.8	1.3	--	--
Other red oaks	272.3	15.4	28.5	41.0	53.8	47.2	36.9	24.9	16.0	8.6	--
Hickory	114.6	19.8	31.5	18.4	20.2	5.1	5.5	1.4	6.2	6.5	--
Sugar maple	97.8	8.0	23.0	22.5	13.4	9.3	7.3	5.7	1.2	6.2	1.2
Soft maples	404.2	115.5	97.5	79.2	41.6	27.5	22.3	6.6	5.0	6.1	2.9
Yellow birch	32.1	12.2	6.7	2.2	3.0	4.5	.1	2.2	--	1.2	--
Sweet birch	143.9	33.4	38.8	28.8	20.4	9.4	6.4	2.1	3.4	1.2	--
Paper birch	14.9	4.5	4.1	3.4	1.7	1.0	.1	.1	--	--	--
Beech	39.1	5.4	5.9	9.7	5.3	6.8	2.8	1.7	--	1.5	--
White ash	115.6	13.1	20.9	26.4	19.5	15.7	10.2	4.0	1.7	4.1	--
Black cherry	33.1	5.0	7.7	8.5	6.4	1.1	2.2	2.2	--	--	--
Aspen	13.9	1.3	6.6	4.8	1.1	.1	--	--	--	--	--
Elms	12.1	2.8	1.7	4.5	1.9	--	1.2	--	--	--	--
Other hardwoods	47.1	3.5	6.6	3.4	7.5	7.9	4.2	5.1	1.4	6.3	1.2
All hardwoods	1,994.6	304.3	356.1	370.4	290.1	236.5	168.6	114.0	73.0	73.1	8.5
All species	2,351.8	353.6	407.8	429.0	335.6	279.7	205.3	137.6	90.0	97.9	15.3

Table 14.--Net volume of sawtimber on commercial forest land, by species and diameter classes,
Connecticut, 1972

(In millions of board feet)^{a/}

Species	All classes	Diameter class (inches at breast height)							
		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+
White pine	357.5	54.7	31.5	61.4	43.8	60.6	46.2	40.9	18.4
Hemlock	535.8	72.8	105.0	71.3	108.7	49.5	34.3	79.5	14.7
Other softwoods	184.5	63.4	45.8	56.7	18.6	--	--	--	--
All softwoods	1,077.8	190.9	182.3	189.4	171.1	110.1	80.5	120.4	33.1
Select white oaks	381.9	--	95.9	118.9	38.0	70.5	37.4	21.2	--
Select red oaks	1,143.4	--	219.4	242.5	244.4	170.6	127.0	124.7	14.8
Other white oaks	68.0	--	15.1	32.2	7.2	7.5	6.0	--	--
Other red oaks	748.1	--	190.0	184.2	155.2	106.6	71.4	40.7	--
Hickory	177.9	--	71.3	19.9	23.3	6.1	27.6	29.7	--
Sugar maple	178.3	--	47.2	36.2	30.3	24.3	5.5	29.1	5.7
Soft maples	440.5	--	147.0	107.8	93.7	28.0	22.5	28.4	13.1
Yellow birch	44.1	--	10.7	17.9	.5	9.7	--	5.3	--
Sweet birch	166.3	--	72.9	36.9	26.9	8.7	15.3	5.6	--
Paper birch	11.0	--	5.8	4.1	.6	.5	--	--	--
Beech	72.1	--	18.8	26.8	11.8	7.4	--	7.3	--
White ash	218.6	--	69.7	61.6	43.3	17.1	7.8	19.1	--
Black cherry	45.8	--	23.0	4.2	9.1	9.5	--	--	--
Aspen	4.4	--	3.9	.5	--	--	--	--	--
Elms	11.7	--	6.7	--	5.0	--	--	--	--
Other hardwoods	137.8	--	26.9	30.6	17.4	22.3	6.2	28.7	5.7
All hardwoods	3,849.9	--	1,024.3	924.3	706.7	488.8	326.7	339.8	39.3
All species	4,927.7	190.9	1,206.6	1,113.7	877.8	598.9	407.2	460.2	72.4

^{a/} International 1/4-inch rule.

Table 15.--Net volume of sawtimber on commercial forest land,
by species and quality classes, Connecticut, 1972

(In millions of board feet)^{a/}

Species	All classes	Standard-lumber logs			
		Grade 1	Grade 2	Grade 3	Grade 4 ^{b/}
Softwoods:					
White pine	357.5	27.8	45.2	184.1	100.4
Red pine	155.7	57.9	27.4	58.9	11.5
Pitch pine	22.0	.1	7.6	14.3	--
Other softwoods ^{c/}	542.6	--	--	--	--
Total softwoods	1,077.8	85.8	80.2	257.3	111.9
Hardwoods:					
Select white oaks	381.9	24.0	89.5	202.2	66.2
Select red oaks	1,143.4	221.5	304.9	523.0	94.0
Other white oaks	68.0	16.1	12.2	26.0	13.7
Other red oaks	748.1	92.1	162.3	406.6	87.1
Hickory	177.9	33.4	29.8	67.5	47.2
Sugar maple	178.3	15.3	39.9	87.6	35.5
Soft maple	440.5	20.6	75.1	278.1	66.7
Yellow birch	44.1	.7	5.0	31.5	6.9
Sweet birch	166.3	11.4	29.7	114.7	10.5
Paper birch	11.0	.4	1.7	8.0	.9
Beech	72.1	.6	8.3	57.1	6.1
White ash	218.6	39.2	59.3	83.7	36.4
Black cherry	45.8	--	6.8	30.5	8.5
Aspen	4.4	--	.4	3.2	.8
Elms	11.7	--	--	10.6	1.1
Other hardwoods	137.8	27.4	51.0	36.5	22.9
Total hardwoods	3,849.9	502.7	875.9	1,966.8	504.5
(In percent)					
Hardwood quality	100	13	23	51	13

^{a/} International 1/4-inch rule.

^{b/} Grade 4 applies only to the pines. For hardwoods the volumes in this column are for construction logs.

^{c/} Species other than pine are not graded into standard-lumber grades.

Table 16.--Annual net growth, removals,^{a/} and mortality of growing stock and sawtimber on commercial forest land, by species, Connecticut, 1972

Species	Growing stock			Sawtimber		
	Annual net growth	Annual timber removals	Annual mortality	Annual net growth	Annual timber removals	Annual mortality
	----- Thousand cubic feet -----			----- Thousand board feet ^{b/} -----		
Softwoods:						
White pine	4,195	214	128	14,633	992	414
Red pine	3,421	921	231	7,358	1,177	314
Hemlock	5,997	388	658	22,158	1,949	2,601
Other softwoods	787	77	350	1,451	382	66
Total softwoods	14,400	1,600	1,367	45,600	4,500	3,395
Hardwoods:						
Select white oaks	5,563	1,010	1,824	17,383	3,490	1,947
Select red oaks	13,729	3,371	2,000	45,033	5,596	776
Other red oaks	9,173	1,825	1,175	30,294	6,862	2,196
Other white oaks	1,583	155	1,675	4,216	1,589	687
Hickory	3,732	768	591	5,448	1,251	479
Sugar maple	3,358	786	74	9,273	2,389	815
Soft maples	14,018	2,235	2,004	25,640	7,695	508
Yellow birch	689	404	352	1,485	725	223
Sweet birch	2,964	445	350	3,242	501	229
Beech	1,659	473	304	4,443	1,634	995
White ash	2,243	359	561	6,750	1,678	593
Elm	-1,600	85	1,919	-2,082	3	1,801
Yellow-poplar	915	172	391	2,910	699	140
Other hardwoods	1,374	312	613	4,365	1,088	216
Total hardwoods	59,400	12,400	13,833	158,400	35,200	11,605
Total, all species	73,800	14,000	15,200	204,000	39,700	15,000

^{a/} Data for timber removals in this table are based on the trend from 1952 through 1971.

^{b/} International 1/4-inch rule.

Table 17.--Annual net growth and removals of growing stock and sawtimber on commercial forest land, by ownership classes, softwoods and hardwoods, Connecticut, 1971

	Annual net growth			Annual timber removals		
	All species	Softwoods	Hardwoods	All species	Softwoods	Hardwoods
GROWING STOCK						
(thousand cubic feet)						
Public	7,561	1,644	5,917	775	--	775
Farmer and other	66,239	12,756	53,483	13,225	1,600	11,625
All ownerships	73,800	14,400	59,400	14,000	1,600	12,400
SAWTIMBER						
(thousand board feet) ^{a/}						
Public	19,114	5,206	13,908	1,764	--	1,764
Farmer and other	184,886	40,394	144,492	37,936	4,500	33,436
All ownerships	204,000	45,600	158,400	39,700	4,500	35,200

^{a/} International 1/4-inch rule.

Table 18.--Annual mortality of growing stock and sawtimber on commercial forest land, by ownership classes, causes, softwoods and hardwoods, Connecticut, 1971

Ownership and cause	Growing stock (thousand cubic feet)			Sawtimber (thousand board feet) ^{a/}		
	All species	Softwoods	Hardwoods	All species	Softwoods	Hardwoods
BY OWNERSHIP CLASS						
Public	1,201	--	1,201	1,578	--	1,578
Farmer and other	13,999	1,367	12,632	13,422	3,395	10,027
All ownerships	15,200	1,367	13,833	15,000	3,395	11,605
BY CAUSE						
Disease	12,809	1,334	11,475	13,611	3,395	10,216
Logging	309	--	309	671	--	671
Weather	258	--	258	111	--	111
Suppression	188	--	188	352	--	352
Unknown	1,636	33	1,603	255	--	255
All causes	15,200	1,367	13,833	15,000	3,395	11,605

^{a/} International 1/4-inch rule.

Table 19.--Components of average annual net growth of
growing stock and sawtimber on commercial
forest land, softwoods and hardwoods,
Connecticut, 1952-71

Components	All species	Soft- woods	Hard- woods
GROWING STOCK (thousand cubic feet)			
Growth on initial growing-stock inventory <u>a/</u>	41,174	4,106	37,068
Ingrowth--saplings that became poletimber	35,845	8,598	27,247
Gross growth	77,019	12,704	64,315
Cull increment	2,719	504	2,215
Annual mortality	12,900	1,000	11,900
Average annual net growth	61,400	11,200	50,200
SAWTIMBER (thousand board feet) <u>b/</u>			
Growth on initial sawtimber inventory <u>a/</u>	71,907	19,558	52,349
Ingrowth--poletimber trees that became sawtimber	104,583	28,100	76,483
Gross growth	176,490	47,658	128,832
Cull increment	3,390	2,558	832
Annual mortality	11,100	2,600	8,500
Average annual net growth	162,000	42,500	119,500

a/ Including growth on trees that were cut.

b/ International 1/4-inch rule.

Table 20.--Sampling errors for major forest area and timber-volume classes, Connecticut, 1972

Table no.	Item classification	Sampling error	Table no.	Item classification	Sampling error	
FOREST AREA			TIMBER VOLUME			
		<u>Percent</u>			<u>Cubic feet</u>	<u>Board feet</u>
1	Forest-land area:				<u>Percent</u>	
	Commercial	2.3	14	Class of timber:		
	Unproductive	*		Sawtimber trees	5	--
	Total	2.5		Poletimber trees	5	--
2	Ownership:			All growing stock	3	--
	Forest industry	**		Rough trees	12	--
	Farmer owned	28		Rotten trees	13	--
	Misc. private	6		All live trees	3	--
	Farmer and misc. private	5	15	Ownership:		
3	Stand-size class:			Other public	16	18
	Sawtimber stands	11		Forest industry	*	*
	Poletimber stands	12		Farmer and other	6	7
	Sapling-seedling stands	11	15	Stand-size class:		
4	Stand-volume per acre (board feet):			Sawtimber stands	9	8
	Less than 1,500	12		Poletimber stands	12	16
	1,500 to 5,000	8		Sapling-seedling	16	19
	More than 5,000	15	16	Forest type:		
7	Area-condition class:			White pine, red pine, hemlock	19	20
	Class <u>50</u>			Spruce-fir	*	*
	Class <u>60</u>	7		Pitch pine-eastern		
	Class <u>70</u>	26		redcedar	*	*
8	Growth-per-acre class (cubic feet):			Oak-pine	46	*
	120 to 165	*		Oak-hickory	11	13
	85 to 120	25		Elm-ash-red maple	18	23
	50 to 85	13		Maple-beech-birch	23	24
	Less than 50	9		Aspen-birch	*	*

9	Forest type:		
	White pine, red pine, hemlock	18	
	Spruce-fir	*	
	Pitch pine-eastern redcedar	*	
	Oak-pine	35	
	Oak-hickory	10	
	Elm-ash-red maple	16	
	Maple-beech-birch	20	
	Aspen-birch	*	
		<u>Cubic</u>	<u>Board</u>
		<u>feet</u>	<u>feet</u>
		<u>Percent</u>	
17-18	Species:		
	White pine	29	33
	Hemlock	25	24
	Other softwoods	46	*
	All softwoods	15	16
	Select white oaks	13	14
	Select red oaks	11	12
	Other white oaks	34	43
	Other red oaks	14	16
	Hickory	21	39
	Yellow birch	27	40
	Sweet birch	18	25
	Paper birch	34	*
	Sugar maple	27	34
	Soft maples	13	20
	Beech	30	40
	White ash	21	28
	Aspen	47	*
	Black cherry	25	36
	Elm	32	*
	Other hardwoods	24	30
	All hardwoods	4	6
	All species	2.8	4.0

17-18	Diameter classes (inches):		
	5.0- 6.9	7	--
	7.0- 8.9	7	--
	9.0-10.9 <u>a/</u>	6	23
	11.0-12.9	6	7
	13.0-14.9	7	8
	15.0-16.9	8	7
	17.0-18.9	10	10
	19.0-20.9	14	13
	21.0-28.9	16	15
	29.0 and larger	29	29

	GROWTH-REMOVAL		
21	Growth by:		
	Softwoods	44	36
	Hardwoods	10	8
	All species	11	8
21	Removals by:		
	Softwoods	41	*
	Hardwoods	23	32
	All species	22	31
	MORTALITY		
22	By species group:		
	Softwoods	*	*
	Hardwoods	16	30
	All species	16	36
22	By cause:		
	Weather	*	**
	Logging	*	**
	Disease	18	39
	Suppression	*	**
	Unknown	*	**

* Sampling errors of 50 to 99 percent.

** Sampling errors of 100 percent or more.

a/ Board-foot sampling error for this class is for softwoods only.

Table 21.--Output of timber products, by source of material, softwoods and hardwoods, Connecticut, 1971

Product and species group	Standard units	Total output		Output from roundwood		Output from plant byproducts	
		Number of units	Thousand cubic feet	Number of units	Thousand cubic feet	Number of units	Thousand cubic feet
Sawlogs:							
Softwood	M bd. ft. ^{a/}	6,009	1,007	6,009	1,007	--	--
Hardwood	M bd. ft. ^{a/}	21,649	3,632	21,649	3,632	--	--
Total	M bd. ft. ^{a/}	27,658	4,639	27,658	4,639	--	--
Veneer logs and bolts:							
Softwood	M bd. ft. ^{a/}	--	--	--	--	--	--
Hardwood	M bd. ft. ^{a/}	57	14	57	14	--	--
Total	M bd. ft. ^{a/}	57	14	57	14	--	--
Pulpwood:							
Softwood	Std. cords ^{b/}	4,193	356	4,181	355	12	1
Hardwood	Std. cords ^{b/}	6,668	567	6,668	567	--	--
Total	Std. cords ^{b/}	10,861	923	10,849	922	12	1
Cooperage logs and bolts:							
Softwood	M bd. ft. ^{a/}	--	--	--	--	--	--
Hardwood	M bd. ft. ^{a/}	125	17	125	17	--	--
Total	M bd. ft. ^{a/}	125	17	125	17	--	--
Piling:							
Softwood	M linear ft.	2	1	2	1	--	--
Hardwood	M linear ft.	233	85	233	85	--	--
Total	M linear ft.	235	86	235	86	--	--

Posts (round and split):							
Softwood	M pieces	15	12	15	12	--	--
Hardwood	M pieces	--	--	--	--	--	--
Total		15	12	15	12	--	--
Other: ^{c/}							
Softwood	M cu. ft.	167	167	5	5	162	162
Hardwood	M cu. ft.	878	878	108	108	770	770
Total		1,045	1,045	113	113	932	932
Total industrial products:							
Softwood	M cu. ft.	--	1,543	--	1,380	--	163
Hardwood	M cu. ft.	--	5,193	--	4,423	--	770
Total		--	6,736	--	5,803	--	933
Fuelwood:							
Softwood	Std. cords	712	57	101	8	612	49
Hardwood	Std. cords	11,627	930	8,327	666	3,300	264
Total		12,339	987	8,428	674	3,912	313
All products: ^{d/}							
Softwood	M cu. ft.	--	1,600	--	1,388	--	212
Hardwood	M cu. ft.	--	6,123	--	5,089	--	1,034
Total		--	7,723	--	6,477	--	1,246

a/ International 1/4-inch rule.

b/ Rough wood basis, includes chips converted to equivalent standard cords.

c/ Includes dimension bolts, shingle bolts, charcoal wood, horticultural mulch, and wood novelty items.

d/ Does not include 124,000 cubic feet of softwood and 419,000 cubic feet of hardwood residues used for agricultural bedding.

Table 22.--Output of roundwood products, by source, softwoods and hardwoods, Connecticut, 1971

(In thousands of cubic feet)

Product and species group	All sources	Growing-stock trees ^{a/}			Rough and rotten trees ^{a/}	Salvable dead trees ^{a/}	Other sources ^{b/}
		Total	Sawtimber	Poletimber			
PRINCIPAL INDUSTRIAL PRODUCTS							
Sawlogs:							
Softwood	1,007	873	845	28	--	7	127
Hardwood	3,632	3,487	3,319	168	16	--	129
Total	4,639	4,360	4,164	196	16	7	256
Veneer logs and bolts:							
Softwood	--	--	--	--	--	--	--
Hardwood	14	13	13	--	--	--	1
Total	14	13	13	--	--	--	1
Pulpwood:							
Softwood	355	305	127	178	1	2	47
Hardwood	567	322	--	322	--	--	245
Total	922	627	127	500	1	2	292
MISCELLANEOUS INDUSTRIAL PRODUCTS							
Cooperage logs and bolts:							
Softwood	--	--	--	--	--	--	--
Hardwood	17	16	16	--	--	--	1
Total	17	16	16	--	--	--	1

Piling:							
Softwood	1	1	1	--	--	--	--
Hardwood	85	82	78	4	--	--	3
Total	86	83	79	4	--	--	3
Posts (round and split):							
Softwood	12	4	--	4	--	7	1
Hardwood	--	--	--	--	--	--	--
Total	12	4	--	4	--	7	1
Other:							
Softwood	5	2	--	2	--	2	1
Hardwood	108	71	46	25	18	4	15
Total	113	73	46	27	18	6	16
TOTAL INDUSTRIAL PRODUCTS							
Softwood	1,380	1,185	973	212	1	18	176
Hardwood	4,423	3,991	3,472	519	34	4	394
Total	5,803	5,176	4,445	731	35	22	570
NONINDUSTRIAL PRODUCTS							
Fuelwood:							
Softwood	8	3	--	3	--	4	1
Hardwood	666	437	285	152	114	23	92
Total	674	440	285	155	114	27	93
ALL PRODUCTS							
Softwood	1,388	1,188	973	215	1	22	177
Hardwood	5,089	4,428	3,757	671	148	27	486
Total	6,477	5,616	4,730	886	149	49	663

a/ On commercial forest land.

b/ Includes trees less than 5.0 inches in diameter, tree tops and limbs from commercial forest areas, or any material from noncommercial forest land or nonforest land such as fence rows and suburban areas.

Table 23.--Timber removals from growing stock and sawtimber on commercial forest land,
by items, softwoods and hardwoods, Connecticut, 1971

Item	Growing stock			Sawtimber		
	All species	Softwoods	Hardwoods	All species	Softwoods	Hardwoods
	----- <u>Thousand cubic feet</u> -----			----- <u>Thousand board feet</u> ^{a/} -----		
Roundwood products:						
Sawlogs	4,360	873	3,487	18,806	3,838	14,968
Veneer logs and bolts	13	--	13	59	--	59
Pulpwood	627	305	322	463	463	--
Cooperage logs and bolts	16	--	16	72	--	72
Piling	83	1	82	357	5	352
Poles	--	--	--	--	--	--
Posts	4	4	--	--	--	--
Mine timbers	--	--	--	--	--	--
Other	73	2	71	207	--	207
Fuelwood	440	3	437	1,285	--	1,285
All products	5,616	1,188	4,428	21,249	4,306	16,943
Logging residues	998	99	899	569	106	463
Other removals	11,606	348	11,258	975	50	925
Total removals	18,220	1,635	16,585	22,793	4,462	18,331

^{a/} International 1/4-inch rule.

Table 24.--Volume of unused residues at sawmills,^{a/}
by type of residue for softwoods and
hardwoods, Connecticut, 1971

(In thousands of cubic feet)

Type of residue	Softwoods	Hardwoods	All species
Coarse ^{b/}	89.5	181.2	270.7
Fine ^{c/}	1.0	10.2	11.2
Total	90.5	191.4	281.9

a/ The sawmill industry was the only industry in Connecticut with unused residues.

b/ Material such as slabs and edgings.

c/ Material such as sawdust and shavings.

Table 25.--Area by land classes and counties, Connecticut, 1972

County	Total land area ^{a/}	Nonforest land area	Forest-land area		Sampling error ^{c/}
			Non- commercial ^{b/}	Commercial	
		-----Thousand acres-----			Per- cent
					Percent
Fairfield	400.9	214.1	3.0	183.8	46
Hartford	472.8	257.6	4.8	210.4	44
Litchfield	595.3	174.0	22.2	399.1	67
Middlesex	237.8	75.4	5.0	157.4	66
New Haven	386.8	199.7	4.4	182.7	47
New London	427.0	139.8	8.4	278.8	65
Tolland	266.1	88.5	3.2	174.4	66
Windham	330.1	106.9	4.2	219.0	66
Total	3,116.8	1,256.0	55.2	1,805.6	58

^{a/} Source: Area Measurement Report, Bureau of the Census, Areas of Connecticut: 1960.

^{b/} Includes nonproductive and productive-reserved forest land.

^{c/} In percent for commercial forest land, at the 68 percent probability level.

Table 26.--Area of commercial forest land, by ownership
classes and counties, Connecticut, 1972

(In thousands of acres)

County	Public-owned			Private-owned		Total
	Other federal	State	County and municipal	Farmer-owned	Other private	
Fairfield	--	2.8	6.0	3.5	171.5	183.8
Hartford	--	1.9	5.7	15.3	187.5	210.4
Litchfield	0.7	34.5	1.8	34.9	327.2	399.1
Middlesex	.1	25.2	1.0	5.8	125.3	157.4
New Haven	--	3.7	5.6	7.8	165.6	182.7
New London	--	22.8	1.8	26.0	228.2	278.8
Tolland	1.6	15.2	1.4	13.4	142.8	174.4
Windham	--	13.7	1.1	21.6	182.6	219.0
Total	2.4	119.8	24.4	128.3	1,530.7	1,805.6

Table 27.--Area of commercial forest land, by stand-size
classes and counties, Connecticut, 1972

(In thousands of acres)

County	Sawtimber stands	Poletimber stands	Sapling-seedling stands	Total
Fairfield	51.6	68.7	63.5	183.8
Hartford	68.6	68.0	73.8	210.4
Litchfield	188.0	125.3	85.8	399.1
Middlesex	50.3	59.4	47.7	157.4
New Haven	60.7	57.6	64.4	182.7
New London	84.1	89.9	104.8	278.8
Tolland	54.4	58.5	61.5	174.4
Windham	73.3	72.7	73.0	219.0
Total	631.0	600.1	574.5	1,805.6

Table 28.--Area of commercial forest land, by forest types and counties, Connecticut, 1972

(In thousands of acres)

County	White pine- red pine- hemlock	Spruce- fir	Pitch pine- eastern redcedar	Oak- pine	Oak- hickory	Elm-ash- red maple	Maple- beech- birch	Aspen- birch	Total
Fairfield	10.0	2.3	3.7	13.1	82.6	39.9	30.7	1.5	183.8
Hartford	25.6	1.8	4.5	12.1	84.1	44.6	35.2	2.5	210.4
Litchfield	65.2	--	3.8	13.0	124.4	109.7	69.9	13.1	399.1
Middlesex	10.6	1.3	2.2	8.8	73.2	34.3	25.5	1.5	157.4
New Haven	17.4	2.7	2.8	13.1	76.9	38.2	30.2	1.4	182.7
New London	14.5	3.2	5.9	18.4	121.5	64.5	47.4	3.4	278.8
Tolland	13.2	2.1	2.6	11.2	75.5	38.5	29.5	1.8	174.4
Windham	23.7	2.5	3.7	13.4	91.9	45.7	36.0	2.1	219.0
Total	180.2	15.9	29.2	103.1	730.1	415.4	304.4	27.3	1,805.6

Table 29.--Net volume of growing stock and sawtimber on commercial forest land, by stand-size classes and counties, Connecticut, 1972

County	Sawtimber stands	Poletimber stands	Seedling-sapling stands	Total	Sampling error of total
<u>----- Million cubic feet -----</u>					<u>Percent</u>
Fairfield	83.8	95.2	44.4	223.4	11
Hartford	119.7	92.9	47.8	260.4	11
Litchfield	401.1	184.4	48.5	634.0	9
Middlesex	82.7	81.4	31.8	195.9	10
New Haven	105.2	78.1	45.2	228.5	12
New London	131.6	121.7	66.7	320.0	9
Tolland	89.9	80.0	41.3	211.2	11
Windham	127.9	100.5	50.0	278.4	10
Total	1,141.9	834.2	375.7	2,351.8	3
<u>----- Million board feet ^{a/} -----</u>					<u>Percent</u>
Fairfield	228.4	124.7	89.1	442.2	17
Hartford	333.8	121.5	93.3	548.6	18
Litchfield	1,092.4	263.3	64.0	1,419.7	13
Middlesex	222.2	104.8	61.9	388.9	18
New Haven	292.5	101.7	85.8	480.0	19
New London	358.8	156.4	124.0	639.2	15
Tolland	246.6	103.6	78.1	428.3	18
Windham	354.7	130.9	95.2	580.8	16
Total	3,129.4	1,106.9	691.4	4,927.7	4

a/ International 1/4-inch rule.

Table 30.--Net volume of growing stock on commercial forest land, by forest types and counties,
Connecticut, 1972

County	White pine- red pine hemlock	Spruce- fir	Pitch pine- eastern redcedar	Oak- pine	Oak hickory	Elm-ash- red maple	Maple- beech- birch	Aspen- birch	Total
<u>Million cubic feet</u>									
Fairfield	22.4	1.6	1.9	10.9	110.1	44.3	32.0	0.2	223.4
Hartford	53.3	1.2	2.4	9.7	110.5	46.0	37.0	.3	260.4
Litchfield	151.0	--	--	4.8	198.4	143.0	132.3	4.5	634.0
Middlesex	25.1	.8	1.6	7.5	97.1	37.5	26.0	.3	195.9
New Haven	42.8	1.8	2.4	10.0	100.2	40.1	31.0	.2	228.5
New London	30.5	2.1	3.8	13.3	158.0	65.3	46.5	.5	320.0
Tolland	27.9	1.4	2.0	8.6	99.3	40.9	30.8	.3	211.2
Windham	52.8	1.6	2.4	10.7	121.7	49.9	38.9	.4	278.4
Total	405.8	10.5	16.5	75.5	995.3	467.0	374.5	6.7	2,351.8
<u>Million board feet^{a/}</u>									
Fairfield	68.7	0.9	3.6	22.5	205.2	74.8	66.0	0.5	442.2
Hartford	155.6	.7	4.5	20.2	210.8	75.9	80.1	.8	548.6
Litchfield	401.4	--	--	10.8	459.4	287.4	247.8	12.9	1,419.7
Middlesex	73.4	.5	2.9	16.2	181.2	61.7	52.5	.5	388.9
New Haven	129.7	1.1	4.5	19.3	191.4	70.1	63.4	.5	480.0
New London	93.7	1.4	7.1	26.5	305.2	109.5	94.7	1.1	639.2
Tolland	82.3	1.0	3.7	17.5	190.0	68.2	65.0	.6	428.3
Windham	153.5	1.1	4.5	21.8	233.2	83.7	82.3	.7	580.8
Total	1,158.3	6.7	30.8	154.8	1,976.4	831.3	751.8	17.6	4,927.7

^{a/} International 1/4-inch rule.

Table 31.--Net volume of growing stock on commercial forest land, by species, tree classes, and counties,
Connecticut, 1972

(In millions of cubic feet)

Species	Fairfield	Hartford	Litchfield	Middlesex	New Haven	New London	Tolland	Windham	Total
BY SPECIES									
White pine	6.1	17.8	42.6	6.1	8.5	8.0	8.8	16.7	114.6
Hemlock	11.8	19.2	48.7	11.8	19.1	17.7	13.8	19.9	162.0
Other softwoods	3.6	5.8	43.3	4.0	5.2	7.8	4.0	6.9	80.6
All softwoods	21.5	42.8	134.6	21.9	32.8	33.5	26.6	43.5	357.2
Select white oaks	21.0	22.9	21.1	18.3	22.0	34.1	20.6	25.5	185.5
Select red oaks	46.7	45.1	104.1	39.6	40.0	57.5	38.9	49.1	421.0
Other white oaks	2.4	2.6	23.0	3.7	2.9	5.8	3.3	3.7	47.4
Other red oaks	29.5	36.3	32.0	27.2	32.1	46.5	29.7	39.0	272.3
Hickory	12.6	13.5	19.5	10.9	12.5	19.4	11.7	14.5	114.6
Yellow birch	3.4	3.7	7.3	3.0	3.5	4.3	2.9	4.0	32.1
Sweet birch	14.6	16.3	35.0	12.2	15.8	19.3	13.4	17.3	143.9
Paper birch	1.0	1.5	4.7	1.3	1.4	2.1	1.2	1.7	14.9
Sugar maple	7.1	7.0	48.3	5.5	6.9	9.2	6.0	7.8	97.8
Soft maples	40.5	42.8	113.3	32.8	36.8	55.8	36.4	45.8	404.2
Beech	3.3	3.4	15.6	3.0	2.9	4.4	2.9	3.6	39.1
White ash	9.8	11.2	47.5	7.9	8.5	11.3	8.1	11.3	115.6
Black cherry	2.9	3.4	10.0	2.2	3.4	5.0	2.8	3.4	33.1
Elm	1.4	1.4	2.9	1.1	1.1	1.8	1.0	1.4	12.1
Other hardwoods	5.7	6.5	15.1	5.3	5.9	10.0	5.7	6.8	61.0
All hardwoods	201.9	217.6	499.4	174.0	195.7	286.5	184.6	234.9	1,994.6
All species	223.4	260.4	634.0	195.9	228.5	320.0	211.2	278.4	2,351.8
BY TREE CLASSES									
Sawtimber	109.7	134.9	348.4	98.2	118.7	159.6	106.7	143.8	1,220.0
Poletimber	113.7	125.5	285.6	97.7	109.8	160.4	104.5	134.6	1,131.8
All classes	223.4	260.4	634.0	195.9	228.5	320.0	211.2	278.4	2,351.8

Table 32.--Net volume of sawtimber on commercial forest land, by species and counties, Connecticut, 1972(In millions of board feet)^{a/}

Species	Fairfield	Hartford	Litchfield	Middlesex	New Haven	New London	Tolland	Windham	Total
White pine	17.9	53.7	145.3	17.8	26.3	22.3	24.6	49.6	357.5
Hemlock	39.2	62.3	167.5	37.7	61.7	57.8	45.2	64.4	535.8
Other softwoods	4.9	10.7	123.0	6.9	8.6	11.5	6.2	12.7	184.5
All softwoods	62.0	126.7	435.8	62.4	96.6	91.6	76.0	126.7	1,077.8
Select white oaks	43.4	46.9	41.2	38.9	45.3	70.4	42.5	53.3	381.9
Select red oaks	113.6	116.2	331.4	96.4	107.0	153.9	99.4	125.5	1,143.4
Other white oaks	4.2	4.7	26.7	6.4	5.1	9.4	5.4	6.1	68.0
Other red oaks	78.5	101.0	107.6	69.2	87.0	119.3	78.7	106.8	748.1
Hickory	14.2	15.8	67.7	11.7	14.9	23.2	13.7	16.7	177.9
Yellow birch	4.1	4.7	10.3	3.9	4.9	7.0	4.2	5.0	44.1
Sweet birch	17.8	20.1	33.8	14.7	20.8	21.5	16.1	21.5	166.3
Paper birch	.1	.1	8.7	.8	.1	.5	.4	.3	11.0
Sugar maple	11.5	12.1	93.5	8.9	12.3	16.6	10.1	13.3	178.3
Soft maples	43.5	47.3	126.7	35.4	40.4	58.4	38.5	50.3	440.5
Beech	7.7	7.6	18.1	6.7	6.7	10.5	6.8	8.0	72.1
White ash	22.3	23.6	71.8	16.6	18.3	23.7	17.7	24.6	218.6
Black cherry	3.6	4.2	16.2	2.9	4.3	6.6	3.6	4.4	45.8
Elm	1.4	1.3	3.1	1.1	1.0	1.5	1.0	1.3	11.7
Other hardwoods	14.3	16.3	27.1	12.9	15.3	25.1	14.2	17.0	142.2
All hardwoods	380.2	421.9	983.9	326.5	383.4	547.6	352.3	454.1	3,849.9
All species	442.2	548.6	1,419.7	388.9	480.0	639.2	428.3	580.8	4,927.7

^{a/} International 1/4-inch rule.

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