FOREST RESEARCH NOTES

NORTHEASTERN FOREST EXPERIMENT STATION

Upper Darby, Pennsylvania

No. 47
1955

Size Of Trees Cut In The Northeast For Sawlogs And Pulpwood

Foresters and others who engage in woods work find it desirable at times to have information about the size class of trees that are cut for various products.

Much information on this subject has been gathered in wood-utilization studies made in 1947-54 in connection with the U. S. Forest Service's Forest Survey and Timber Resource Review projects. These data have been summarized for sawlogs and pulpwood cut in the Northeast. The summaries are based on more than 6,000 trees cut for sawlogs and nearly 4,000 trees cut for pulpwood.

A distribution of size classes has been worked out by numbers of trees and by volume. Sawtimber trees were divided into two groups: those less than 17 inches diameter breast high (d.b.h.) and those 17 inches or larger. Volume was computed in terms of net cubic feet of growing stock in the trees cut for each product. (Growing stock is defined as the net volume in cubic feet of sawtimber and poletimber trees from a 1-foot stump to a minimum 4.0-inch top of central stem inside bark.)

Tables 1 and 2 show size-class distribution of trees cut for sawlogs in New England and the Middle Atlantic States respectively. Tables 3 and 4 show size-class distribution of trees cut for pulpwood in those same regions.

It should be borne in mind that the size of trees cut is not necessarily an indication of preference. If an adequate supply of larger trees were available, it seems unlikely that many trees of the smaller sizes would be cut for sawlogs.

--WAYNE G. BANKS, Forester
Division of Forest Economics
Northeastern Forest Experiment Station
Forest Service, U.S. Dept. Agriculture

Table 1.--Distribution by size class of trees cut in New England for sawlogs

Species group	Poletimber[1] size		Sawtimber size[2]						Trees in sample
			All sawtimber-size trees		Less than 17 inches d.b.h.		17 inches d.b.h. and larger		
	Tree basis	Volume basis	Tree basis	Volume basis	Tree basis	Volume basis	Tree basis	Volume basis	
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Number
Pine, white and red	22	4	78	96	59	46	19	50	1,542
Spruce-fir	26	7	74	93	61	58	13	35	290
Hemlock	23	5	77	95	63	49	14	46	454
Yellow birch-beech-hard maple	21	6	79	94	48	39	31	55	366
Oaks	21	7	79	93	59	49	20	44	158
Other hard hardwoods[3]	16	6	84	94	65	58	19	36	43
White birch	60	42	40	58	39	55	1	3	161
Other soft hardwoods[4]	58	31	42	69	37	49	5	20	78

[1]Softwood trees from 5 inches to 8.9 inches d.b.h., and hardwood trees from 5 inches to 10.9 inches d.b.h.

[2]Softwood trees 9 inches or more d.b.h. and hardwood trees 11 inches or more d.b.h.

[3]Includes ash, elm, hickory.

[4]Includes basswood, red maple, black cherry, aspen.

Table 2.--Distribution by size class of trees cut in Middle Atlantic States for sawlogs

Species group	Poletimber size		Sawtimber size						Trees in sample
			All sawtimber-size trees		Less than 17 inches d.b.h.		17 inches d.b.h. and larger		
	Tree basis	Volume basis	Tree basis	Volume basis	Tree basis	Volume basis	Tree basis	Volume basis	
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Number
Pine, white and red	4	1	96	99	68	49	28	50	276
Spruce-fir	5	1	95	99	67	45	28	54	64
Hemlock	15	3	85	97	68	54	17	43	208
Hard pine	21	4	79	96	73	79	6	17	529
Cedar-cypress	58	37	42	63	42	63	--	--	187
Yellow birch-beech-hard maple	14	4	86	96	48	35	38	61	549
Oaks	9	2	91	98	50	29	41	69	653
Other hard hardwoods[1]	26	10	74	90	57	52	17	38	180
Yellow-poplar	9	3	91	97	59	41	32	56	138
Other soft hardwoods[2]	15	4	85	96	50	39	35	57	322

[1]Includes elm, ash, hickory, black walnut, black locust.

[2]Includes black cherry, red maple, gums, white birch, basswood, sycamore, etc.

Table 3.--Distribution by size class of trees cut in New England for pulpwood

Species group	Poletimber size		Sawtimber size						Trees in sample
			All sawtimber-size trees		Less than 17 inches d.b.h.		17 inches d.b.h. and larger		
	Tree basis	Volume basis	Tree basis	Volume basis	Tree basis	Volume basis	Tree basis	Volume basis	
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Number
Spruce-fir	56	29	44	71	43	64	1	7	1,357
Hemlock	40	11	60	89	47	43	13	46	104
Hard pine	74	52	26	48	26	48	--	--	42
Yellow birch-beech-hard maple	60	33	40	67	34	48	6	19	398
Other hard hardwoods[1]	52	17	48	83	44	73	4	10	25
White birch	69	34	31	66	31	66	--	--	70
Other soft hardwoods[2]	82	67	18	33	18	33	--	--	160

[1]Includes ash, elm, hickory, oaks.

[2]Includes aspen, red maple, basswood.

Table 4.--Distribution of size class of trees cut in Middle Atlantic States for pulpwood

Species group	Poletimber size		Sawtimber size						Trees in sample
			All sawtimber-size trees		Less than 17 inches d.b.h.		17 inches d.b.h. and larger		
	Tree basis	Volume basis	Tree basis	Volume basis	Tree basis	Volume basis	Tree basis	Volume basis	
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Number
Pine, white and red	43	14	57	86	50	56	7	30	123
Spruce-fir	58	35	42	65	41	63	1	2	276
Hard pine	81	56	19	44	19	44	--	--	964
Yellow birch-beech-hard maple	71	55	29	45	29	45	--	--	87
Oaks	60	30	40	70	37	57	3	13	146
Other hard hardwoods[1]	73	38	27	62	22	34	5	28	104
Soft hardwoods[2]	62	32	38	68	29	37	9	31	130

[1]Includes hickory, ash, elm.

[2]Includes red maple, gum, basswood, white birch, yellow-poplar, sycamore, etc.