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RESEARCH NOTE LS-55

LAKE STATES FOREST EXPERIMENT STATION • U. S. DEPARTMENT OF AGRICULTURE

Forest Type Areas by Counties, Minnesota, 1962

Aspen and birch forests occupy over one-third of the commercial forest land in Minnesota — some 6,254,000 acres (table 1). Oak and the other hardwood types are found on about one-fourth of the commercial forest area, and conifers are found on 28 percent. The remaining 11 percent (1,861,000 acres) is nonstocked.

The aspen-birch type group is widespread, covering about 40 percent of the commercial forest land in each of three survey units, Lake Superior, Central Pine, and Western (fig. 1), and 23 percent in other units. The oak type is well represented in all but the Lake Superior and Rainy River units. Ninety-six percent of the conifer type area occurs in the three northeastern units. Nonstocked commercial forest area varies from 8 percent in the Southeast to 15 percent in the Rainy River unit.

These are statistics from the Third Forest Survey of Minnesota, which was made from 1960 to 1963 by this Station and the Office of Iron Range Resources and Rehabilitation in cooperation with other public and private landowners. Detailed information on present forest resource status and trends will be presented in a summary report for the State and in publications for certain individual counties or units.

The most startling change in the statistics since 10 years ago is a reduction of nearly 2 million acres in nonstocked area (fig. 2) — half the acreage reported in 1953. While some of the difference is due to improvement in survey techniques, much of it can be credited to fire protection and natural regeneration and some to tree planting. Restocking of badly burned-over areas in northern Minnesota has been accelerated during the past decade.

Note that the charts in figure 2 were prepared on semi-logarithmic paper. This facilitates showing both large and small acreages on the same scale and correctly pictures the rate of change.

The post-fire jack pine type is smaller in all survey units than it was a decade ago, while the white and red pine type has increased markedly in all districts. This follows the expected pattern since jack pine does not reproduce itself as well as red and white pine do. Tree planting in recent years has favored red pine.

"Other conifers" show a small but consistent gain in all the survey units. The oak type made a large increase in the Central Pine Unit but lost ground in southern and western Minnesota.

The charts in figure 2 indicate a large invasion in northern Minnesota by "other hardwoods." This is considered an unfavorable trend, since conifers are more desirable than the northern hardwoods, ash, and elm in northern Minnesota.

The sampling error for Statewide forest area statistics is estimated to be about ± 0.2 percent at one standard deviation.

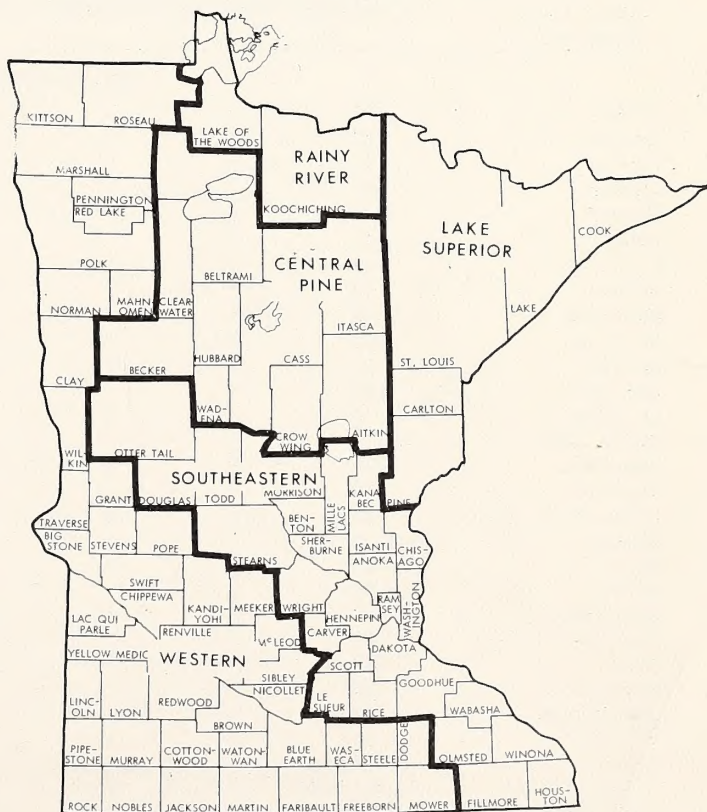


FIGURE 1. — Forest Survey Units in Minnesota.

Table 1.--Commercial forest land by forest cover types in Minnesota, 1962, by survey units and counties, with comparison to the 1953 survey given in parentheses^{1/}

(In thousand acres)

County	Forest type ^{3/}							
	Total commercial forest land area ^{2/}	White and red pine ^{4/}	Jack pine ^{5/}	Other conifers ^{6/}	Oak ^{7/}	Aspen-birch ^{8/}	Other hdwds. ^{9/}	Non-stocked ^{10/}
LAKE SUPERIOR SURVEY UNIT								
Carlton	367	4	6	66	3	154	72	62
Cook	710	28	49	253	-	280	45	55
Lake	1,104	44	77	395	-	390	102	96
Pine	460	1	14	21	20	209	115	80
St. Louis	3,204	115	250	869	-	1,395	252	323
Unit total	5,845(-46)	192(+48)	396(-76)	1,604(+78)	23(+1)	2,428(+19)	586(+229)	616(-345)
Percent	100	3	7	27	*	42	10	11
CENTRAL PINE SURVEY UNIT								
Aitkin	851	4	4	158	39	255	240	151
Becker	386	12	26	20	58	146	97	27
Beltrami	993	22	57	226	13	316	184	175
Cass	1,006	58	78	87	78	497	112	96
Clearwater	368	6	16	38	12	175	78	43
Crow Wing	447	11	44	21	106	153	77	35
Hubbard	440	15	80	34	20	238	23	30
Itasca	1,412	52	55	326	12	629	239	99
Wadena	130	3	47	7	16	27	17	13
Unit total	6,033(-114)	183(+50)	407(-9)	917(+181)	354(+189)	2,436(+102)	1,067(+396)	669(-1,023)
Percent	100	3	7	15	6	40	18	11
RAINY RIVER SURVEY UNIT								
Koochiching	1,575	17	25	815	1	368	172	177
Lake of the Woods	528	4	21	185	1	108	76	133
Unit total	2,103(-16)	21(+14)	46(0)	1,000(+176)	2(+2)	476(+77)	248(+162)	310(-447)
Percent	100	1	2	47	-	23	12	15
SOUTHEASTERN SURVEY UNIT								
Anoka	62	2	-	6	10	20	15	9
Benton	27	*	-	-	8	5	11	3
Carver	24	-	-	-	5	2	15	2
Chisago	53	1	-	2	10	11	22	7
Dakota	34	-	-	-	12	3	12	7
Douglas	42	-	-	-	6	8	24	4
Fillmore	84	1	1	-	43	5	32	2
Goodhue	63	*	1	-	30	5	25	2
Hennepin	31	*	1	-	7	3	16	4
Houston	115	2	-	-	71	9	32	1
Isanti	51	3	-	3	12	12	15	6
Kanabec	155	-	-	1	36	82	24	12
Le Sueur	30	-	*	-	5	2	20	3
Mille Lacs	131	1	-	10	25	47	38	10
Morrison	200	*	3	15	44	64	54	20
Olmsted	48	-	-	-	30	4	13	1
Otter Tail	232	2	1	18	46	79	71	15
Ramsey	7	-	-	-	2	1	3	1
Rice	23	-	-	-	5	2	13	3
Scott	24	1	-	-	5	2	14	2
Sherburne	42	2	-	1	15	6	8	10
Stearns	78	1	*	2	24	14	28	9
Todd	128	1	2	11	34	40	34	6
Wabasha	52	-	-	-	24	5	20	3
Washington	27	1	-	-	6	3	15	2
Winona	96	2	-	-	56	9	27	2
Wright	42	-	-	-	10	3	26	3
Unit total	1,901(+35)	20(+14)	9(-7)	69(+38)	581(-263)	446(+71)	627(+148)	149(+34)
Percent	100	1	-	4	31	23	33	8

Table 1 (cont'd)

(In thousand acres)

County	Forest type ^{3/}							
	Total commercial forest land area ^{2/}	White and red pine ^{4/}	Jack pine ^{5/}	Other conifers ^{6/}	Oak ^{7/}	Aspen birch ^{8/}	Other hwdws. ^{9/}	Non-stocked ^{10/}
WESTERN SURVEY UNIT								
Kittson	94	-	-	1	2	82	6	3
Mahnomen	127	*	5	4	18	57	36	7
Marshall	152	-	-	11	4	123	10	4
Pennington	36	-	-	-	3	25	7	1
Polk	74	-	-	2	3	53	16	-
Red Lake	37	-	-	-	2	25	9	1
Roseau	271	2	22	27	2	83	56	79
Other counties	389	-	-	6	45	20	296	22
Unit total	1,180(-125)	2(+1)	27(-9)	51(0)	79(-72)	468(-12)	436(+38)	117(-71)
Percent	100	-	2	4	7	40	37	10
State total	17,062(-266)	418(+127)	885(-101)	3,641(+473)	1,039(-143)	6,254(+257)	2,964(+973)	1,861(-1,852)
Percent	100	2	5	21	6	37	18	11

1/ Changes by type since last survey are given only for state and unit totals. The changes for commercial forest land and nonstocked are based on 1953 statistics that were adjusted to a comparable basis with the new statistics. For the other types direct comparisons were valid.

2/ Forest land which is producing or capable of producing crops of industrial wood and not withdrawn from timber utilization. Forest tracts of less than 1 acre, and isolated strips of timber less than 120 feet wide are excluded.

3/ A classification of forest land based upon the predominant species in the present tree cover.

4/ Forests in which pine species predominate, with eastern white pine or red pine most common.

5/ Forests in which pine species predominate, with jack pine most common.

6/ Forests in which conifer species other than pine predominate.

7/ Forests in which oak and hickory species predominate.

8/ Forests in which quaking aspen, bigtooth aspen, and white birch predominate.

9/ Forests in which northern hardwoods species, lowland hardwoods species (including balsam poplar), or cottonwood predominate.

10/ Commercial forest lands less than 10 percent stocked with growing stock trees.

* Less than 500 acres.

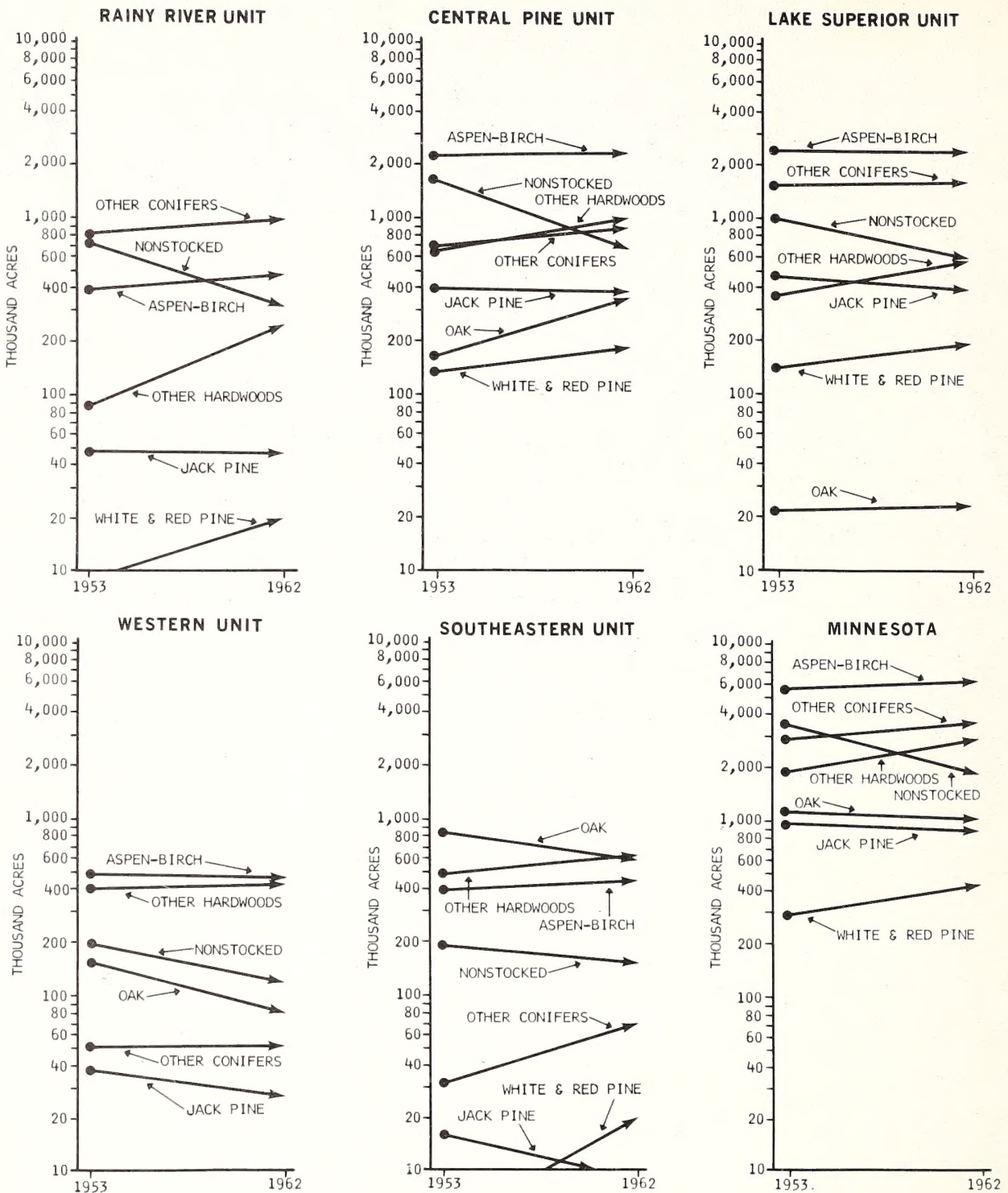


FIGURE 2. — Trends in area by forest cover types between 1953 and 1962. Charts (semi-logarithmic) cover the five Survey Units and the State as a whole.

