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RED PINE SEEDFALL IN SOUTHEASTERN MANITOBA

Project MS-193

by
N. R. Walker

FOREST RESEARCH LABORATORY
WINNIPEG, MANITOBA
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INTRODUCTION¹

Red Pine (Pinus resinosa Ait.) in southeastern Manitoba usually occurs mixed with jack pine (Pinus banksiana Lamb.). In 1954 a project was begun to investigate some of the factors influencing red pine regeneration. In 1957 an additional study was begun to determine the annual red pine seedfall in a partial-cut stand from which all jack pine had been removed and in adjacent one-chain-wide clear cut strips. Seed collections over a period of years will determine whether red pine seedfall is sufficient to regenerate cut-over stands.

1964 SEEDFALL

Seven collections were made of the 1964 seedfall. Seedfall was highest during September and October, 1964 and most of the seed was dispersed by May, 1965. (Table 1)

¹ For further information on this project the reader is referred to previous progress reports (Walker 1964, 1965). A publication summarizing the results to 1962 has been prepared (Gayford 1964).

TABLE 1

RED PINE SEEDFALL AUGUST 31, 1964 - SEPTEMBER 1, 1965

CLEAR CUT AND PARTIAL CUT AREAS

(1/20 milacre traps)

Collection date	No. of traps	No. of seeds collected	Total seedfall per acre	Sound seeds per cent	Sound seeds per acre
West clear-cut strip					
Oct. 5, 1964	24	5	4,160	60	2,500
Oct. 27, 1964	23	0	0	75	0
Nov. 18, 1964	24	1	840	57	480
May 10, 1965	23	4 \angle	3,480	45	1,570
July 5, 1965	23	0	0	45	0
July 26, 1965	24	1	840	0	0
Sept. 1, 1965	24	1	840	25	210
TOTAL			10,160		4,760
Partial cut area					
Oct. 5, 1964	49	21	8,560	60	5,140
Oct. 27, 1964	61	21	6,880	75	5,160
Nov. 18, 1964	58	5	1,720	57	980
May 10, 1965	23	4 \angle	3,480	45	1,570
July 5, 1965	72	13	3,600	45	1,620
July 26, 1965	72	1	280	0	0
Sept. 1, 1965	72	8	2,220	25	560
TOTAL			26,740		15,030
East clear-cut strip					
Oct. 5, 1964	24	7	5,840	60	3,500
Oct. 27, 1964	22	1	900	75	680
Nov. 18, 1964	23	0	0	57	0
May 10, 1965	23	2 \angle	1,740	45	780
July 5, 1965	24	2	1,660	45	750
July 26, 1965	24	0	0	0	0
Sept. 1, 1965	24	0	0	25	0
TOTAL			10,140		5,710

Seedfall shown here will be less than actual amount dispersed since the seedtraps are covered with snow during the winter and this seed will be dispersed by the wind or eaten by rodents.

SCALPED SPOT EXAMINATION

The 1/20-mileacre scalped spots adjacent to each seed trap were examined for seedlings on August 27, 1965. Seedlings were tallied and removed and the scalps were raked down to mineral soil. Table 2 gives the results for the 1965 examination. Per cent stocking and number of germinants per acre was highest on the partial cut area.

TABLE 2

SCALPED SPOT EXAMINATION

Seed year	Year of germination	Sound seeds per acre	Scalps stocked per cent	Number germinantes per acre	Ratio seeds/germinantes
		Clear cut			
1964	1965	5,235	6.2	1,240	4.2:1
		Partial cut			
1964	1965	15,030	22.2	4,440	3.4:1
		Clear cut and partial cut			
1964	1965	10,132	15.8	3,160	3.2:1

WORK PROPOSED - 1966

Seed collections will be made monthly during the summer field season. Seed cutting tests will be made on all seeds by trap and by date of col-

lection.

The scalp spots will be examined for seedings in August before seeds are dispersed from the 1966 cone crop.

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