

FOREST RESEARCH BRANCH



PROGRESS REPORT ON  
TRIALS OF SEED SPOT METHODS WITH FIVE CONIFEROUS SPECIES IN A  
NON-REPRODUCING BURN ON THE LITTLE PABOS RIVER, GASPE PENINSULA,  
FOREST SECTION B-2  
(Project Q-101)

by  
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Quebec District  
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PROGRESS REPORT ON  
TRIALS OF SEED SPOT METHODS WITH FIVE CONIFEROUS SPECIES IN A NON-  
REPRODUCING BURN ON THE LITTLE PABOS RIVER, GASPE PENINSULA, FOREST  
SECTION B-2

by André Choquette<sup>1/</sup>

INTRODUCTION

In June 1963, the last of three experimental sowings scheduled for 1961, 1962 and 1963 was made on the Little Pabos River limits of the Gaspesia Pulp and Paper Company. The field work was conducted by myself assisted by four labourers hired in the nearby settlement of Pellegrin. Some of the seed was collected by the company.

SEED ORIGIN AND PREPARATION

The jack pine, black spruce, Norway spruce and white spruce seed was all of rather poor quality and was collected from Quebec, Valcartier, Shannon and Cap de la Madeleine, respectively. Balsam fir seed was from Chandler.

Germination tests were made in the Forest Research Laboratory. Four samples of fifty seeds of each species were spread out over a double layer of 9 cm. filter paper fitted inside petri dishes.

The incubators were stored at room temperature and distilled water was used to keep the filter paper wet.

Eight to thirteen days were required to test all the seed lots. After this time no appreciable germination took place. Table 1 shows the results.

In order to give every species an equal chance it was aimed to get 100 viable seeds per spot for every spot. For balsam fir, however, one pound of seed had to be apportioned, as it had been done in 1961 and 1962.

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Table 1 - Seed data - 1963

Species	Days of Incubation	Per Cent Germination	Seeds per Spot	Source	Year of Collection
Balsam Fir <sup>1/</sup>	8	32	90	Chandler	1962
Jack Pine	13	56	170	Quebec	1960
Black Spruce	8	63	200	Valcartier	1960
Norway Spruce	10	40	200	Shannon	1962
White Spruce	13	55	200	Cap de la Madeleine	1961

<sup>1/</sup> Stratified for 90 days at 40°F prior to test.

#### FIELD PROCEDURE

In 1963, Block 1 is adjacent to Block 1 established in 1962. All other 1963 blocks are between those of 1961 and 1962. The area was cleared of existing natural regeneration, as it had been done in the 1961 and 1962 blocks. Position of the 1961, 1962 and 1963 blocks and the assigned treatments and species within them are in accordance with the project plan. See annexed map and diagrams.

The weather varied from day to day during the work period. Sunny and warm was the first day while the second one was wet and foggy. The following two days were cloudy with sunny periods and sunny all morning, clouding up in the afternoon while the wind blew stronger and stronger. All the sowing was not done on June 10. Because it rained that afternoon, it was resumed at noon on June 11.

#### RESULTS OF 1961 AND 1962<sup>2</sup> SOWINGS

All the spots sowed in 1961 and 1962 were examined at the same time as the 1963 spots were treated. Care was taken not to disturb any

plant, dead leaf or detrit<sup>u</sup>s that had grown, fallen or stayed on the seed spots. Results are presented in Tables 2 and 3. Nature of the treatments appears on the diagrams.

Table 2 - Per cent of 1961 spots stocked in 1963, by species and by treatment

Treatments	wS	bS	nS	jP	bF	By treatment
Control (T1)	2	2	21	16	2	9
Mineral Soil (T2)	39	42	49	51	19	40
Min. Soil Scarified (T3)	34	44	55	56	15	41
Min. Soil & Org. matter (T4)	13	18	45	56	11	29
Furrow (T5)	21	16	36	34	18	25
By Species	22	24	41	43	13	General = 29%

Table 3 - Per cent of 1962 spots stocked in 1963, by species and by treatment

Treatments	wS	bS	nS	jP	bF	By treatment
Control (T1)	3	3	22	11	3	8
Mineral Soil (T2)	35	29	20	41	41	33
Min. Soil Scarified (T3)	34	21	43	58	48	41
Min. Soil & Org. matter (T4)	19	19	37	37	17	26
Furrow (T5)	54	28	23	34	63	40
By Species	29	20	29	36	34	General = 30%



## COMMENTS

There is great similarity between Table 2 and Table 3. The control plots gave the poorest results and treatment 3 plots gave the best results in both tables.

However, Table 2 treatment 5 plots are not similar to those of Table 3. White spruce and balsam fir plots of that treatment gave outstandingly better results in Table 3 than they did in Table 2.

Considering the hazards to which those young seedlings are exposed, it is too early to draw valid conclusions.

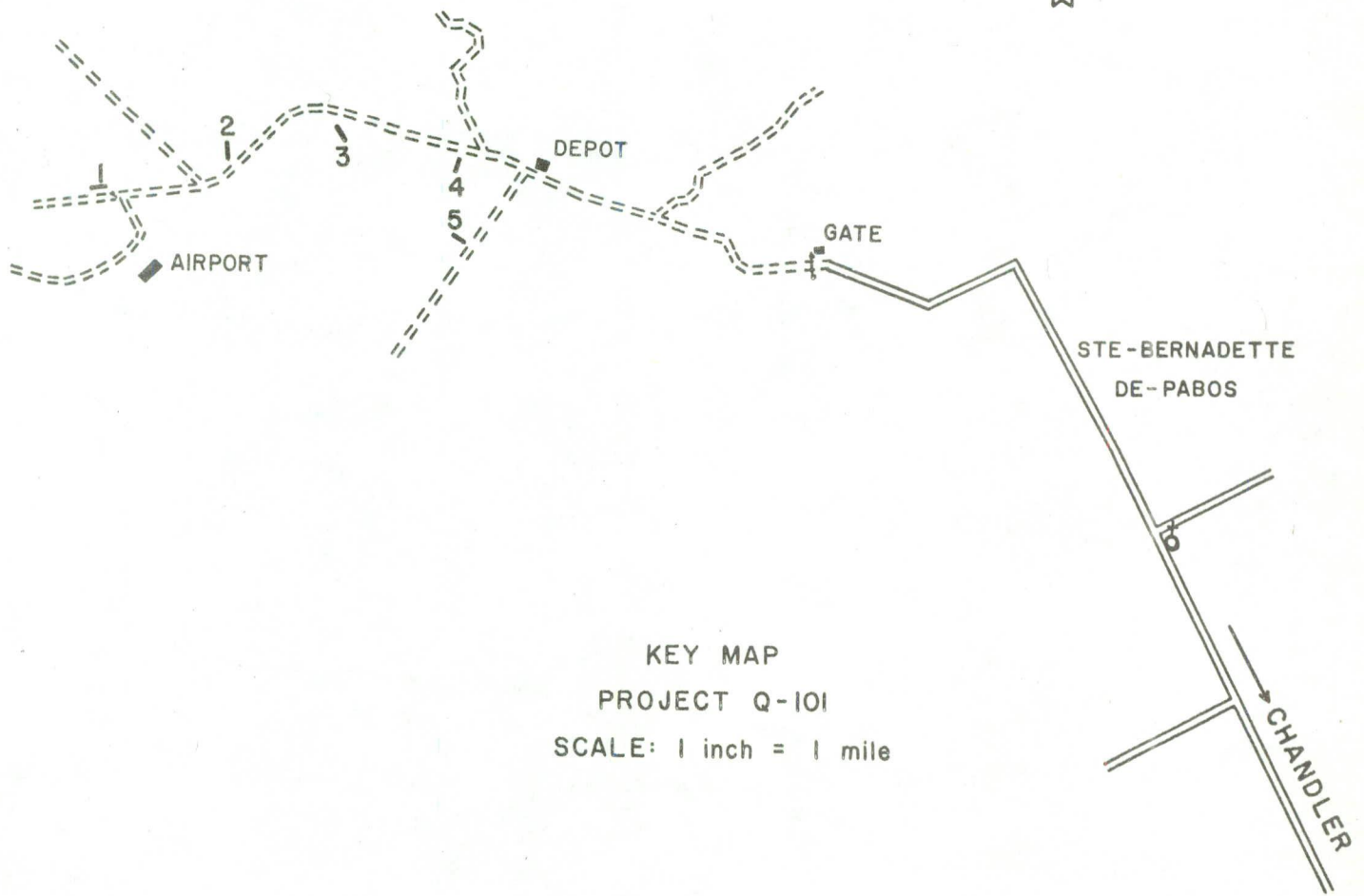
## SUGGESTIONS

Since it took two years to see growing seedlings on many spots sowed in June 1961, the 1962 and 1963 seed spots should be examined and tallied in June 1964. In June 1965 a similar map should be made from the spots sowed in 1963.

The notebooks should be similar to those used for that purpose in 1962 and 1963; showing one square per double page, species and treatments indicated in the same order as they appear on the appended diagrams.

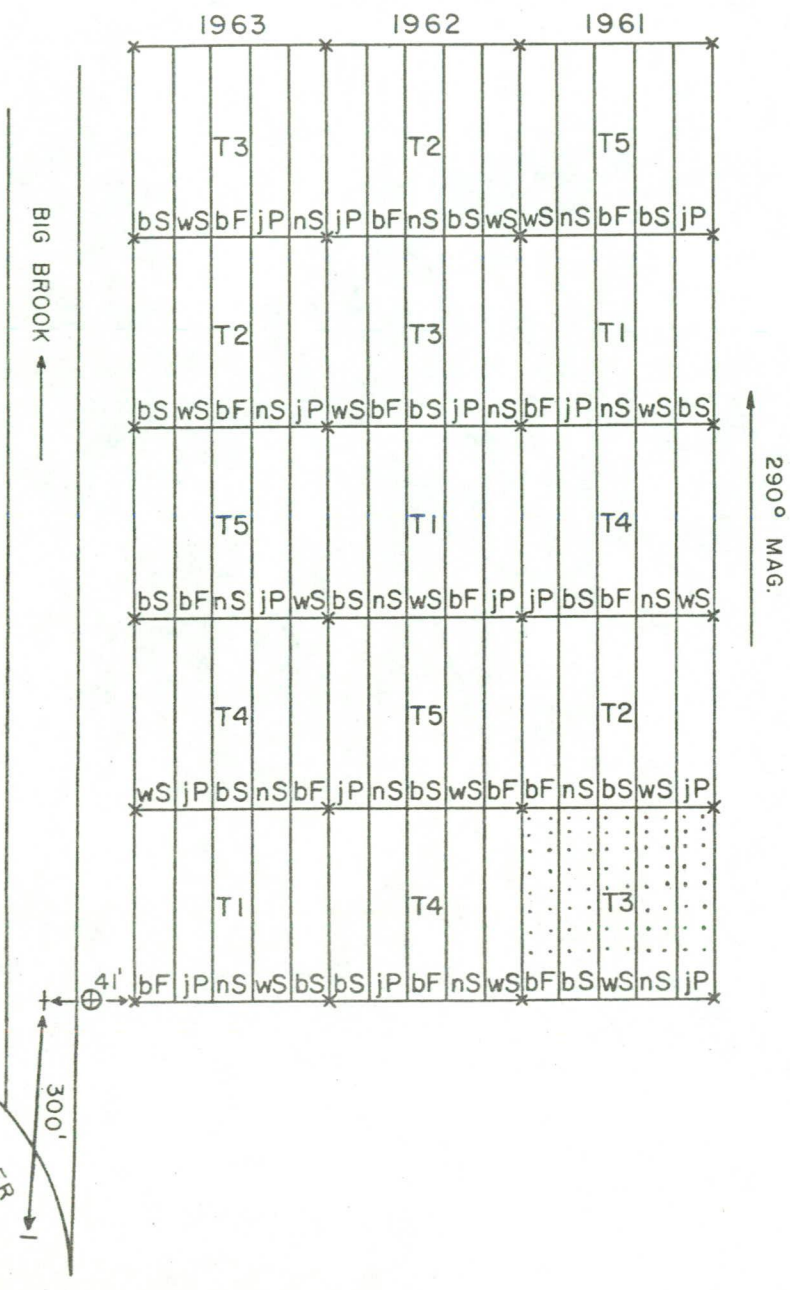
Five years after sowing a third map, like the first two, should be made of each spot, but the actual number of living trees should be recorded with notes on their appearance, total height and leader length.

It might be recommended to thin every overstocked spot, the following June, after careful analysis of the data.



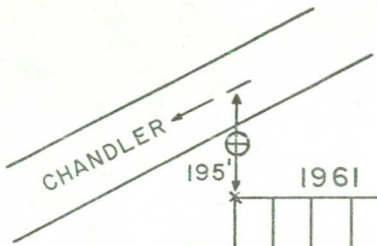
KEY MAP  
PROJECT Q-101  
SCALE: 1 inch = 1 mile

# BLOCK I

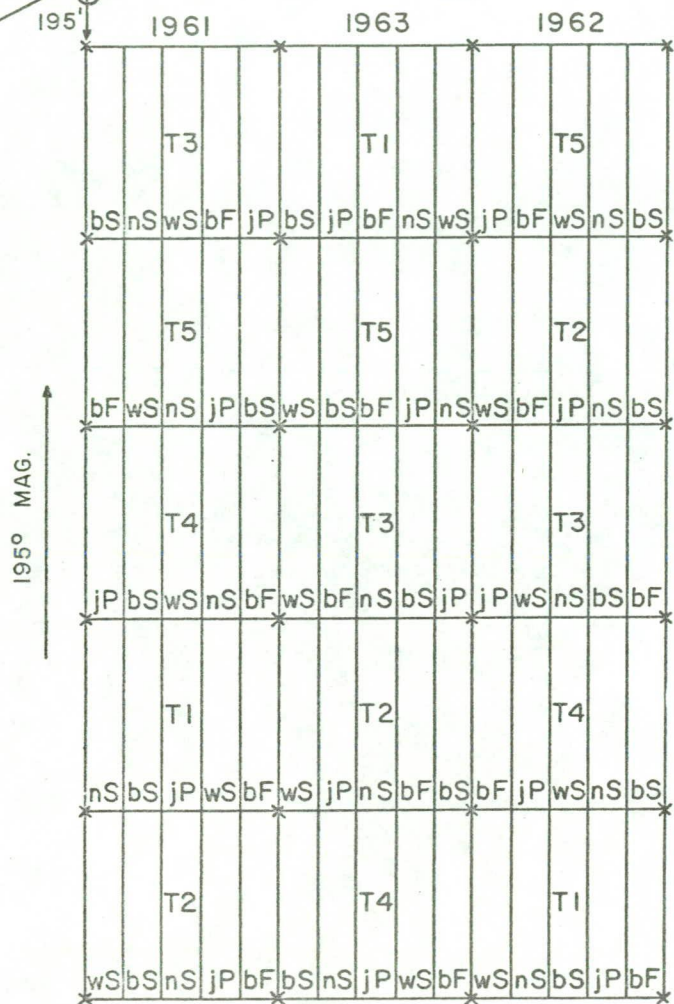


## LEGEND

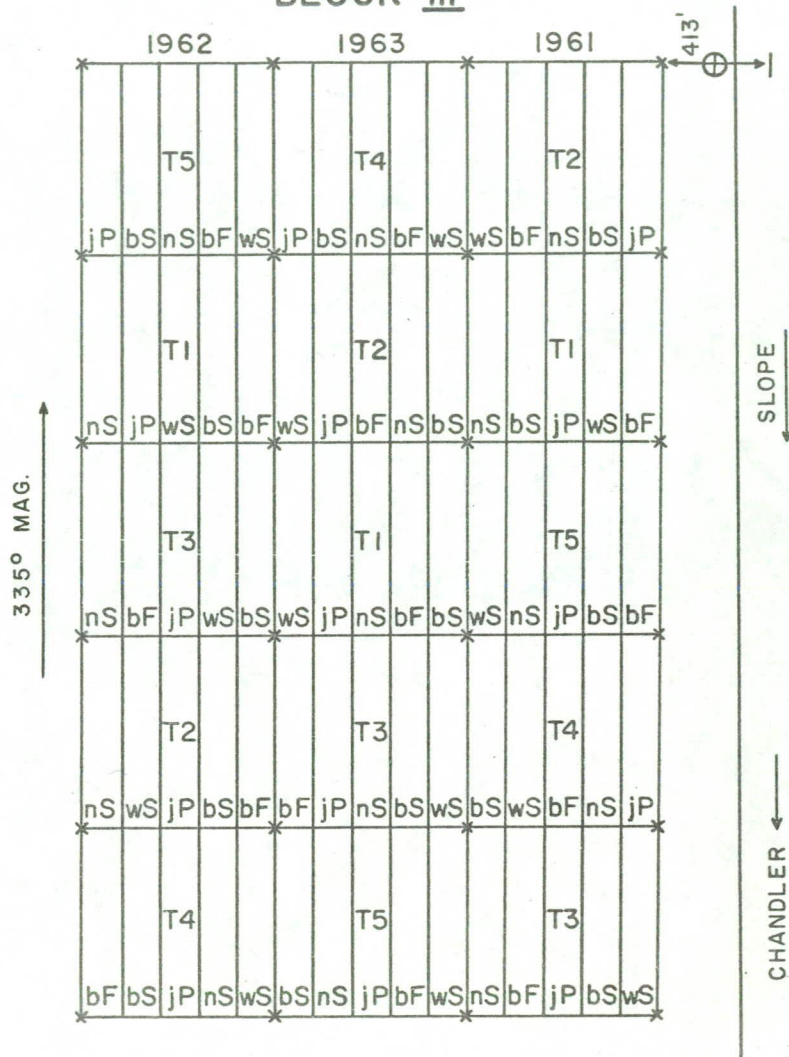
- T1 - CONTROL
- T2 - MINERAL SOIL
- T3 - MINERAL SOIL SCARIFIED
- T4 - MINERAL SOIL AND ORGANIC MATTER MIXED
- T5 - FURROW
- bS - BLACK SPRUCE
- wS - WHITE SPRUCE
- nS - NORWAY SPRUCE
- bF - BALSAM FIR
- jP - JACK PINE
- ⊕ - TIE POST
- X - CREOSOTED PICKET
- - SEED SPOT



### BLOCK II

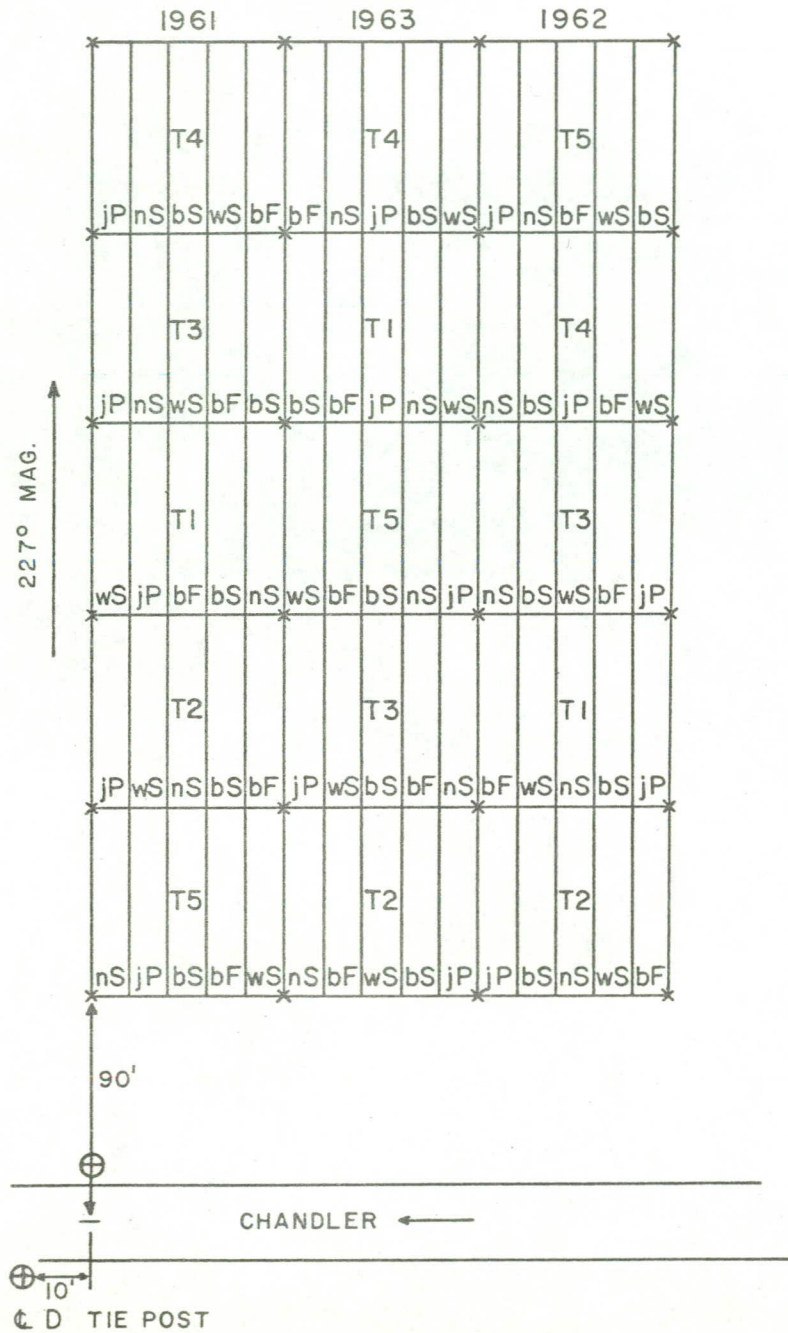


### BLOCK III





### BLOCK IV



### BLOCK V

