



MATACIL APPLIED TO SPRUCE TREES AS  
SIMULATED AERIAL SPRAY - SHAWVILLE - 1976

by

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# MATACIL APPLIED TO SPRUCE TREES AS SIMULATED AERIAL SPRAY - SHAWVILLE - 1976

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Dr. Sundaram required seven small white spruce trees plus a clear area of typical forest soil cover to be treated with Matacil applied as simulated aerial spray deposit. The formulation was applied by use of the technique and device developed by the author for the purpose of producing simulated aerial spray deposits.

## MATACIL

The commercial concentrate contained 1.4 lbs/U.S. gal.  $\equiv$  16.7% wt/vol. For use, the concentrate was diluted 10X with a mixture of fuel oil No. 2:Arotex 3470:3:1 by volume, to give a formulation containing 1.67% wt/vol. Matacil. Automate Red dye was added for assessment purposes.

## APPLICATION

During application the test trees were within a portable shelter, open at the top and enclosing an area 2.13 x 2.13 metres; the height was 2.44 m.

Two applications were made, the first on 6 July, 1976 and the second on 14 July, 1976. Four samples of deposit were taken for each application (5 in the case of bare ground tests) for later assessment for  $\mu$ /ha and number of drops/cm<sup>2</sup>. In each treatment 1.5 ml of formulation was emitted over the 4.55 m<sup>2</sup> for a nominal volume application rate of 3.3  $\mu$ /ha and 55 g AI/ha.

Results of deposit assessments are given in Table I.

Table I

Matacil Deposit on Treated White Spruce Trees - Shawville, 1976

Tree No.	Quadrant	First Application			Second Application		
		ℓ/ha	g AI/ha	Drops/cm <sup>2</sup>	ℓ/ha	g AI/ha	Drops/cm <sup>2</sup>
1	N	6.3	106	50	7.0	118	88
	E	9.1	153	30	2.1	35	13
	S	6.7	113	56	7.0	118	72
	W	7.1	119	55	3.2	54	11
	Avg.	7.3	122	50	4.82	80	46
2	N	2.9	49	24	4.2	71	43
	E	6.5	109	63	2.5	42	34
	S	1.5	25	10	2.3	39	31
	W	8.0	134	63	4.6	77	43
	Avg.	4.72	79	40	3.4	57	38
3	N	1.4	24	16	2.2	37	17
	E	4.1	69	25	2.9	49	32
	S	1.3	22	20	10.3	173	86
	W	2.2	37	21	4.5	76	45
	Avg.	2.25	38	21	4.98	83	45
4	N	2.6	44	50	4.7	79	109
	E	2.8	47	37	1.8	30	12
	S	11.5	193	103	2.9	49	28
	W	3.5	59	8	4.9	82	61
	Avg.	5.1	85	50	3.58	60	82
5	N	2.7	45	47	4.5	76	65
	E	5.0	84	33	3.8	64	40
	S	2.0	34	40	1.3	22	17
	W	3.6	60	49	4.2	70	39
	Avg.	3.32	55	42	3.45	58	40
6	N	2.8	47	43	6.2	104	85
	E	1.9	32	15	1.9	32	9
	S	7.5	126	55	4.4	74	51
	W	2.3	39	28	6.7	113	69
	Avg.	3.62	60	35	4.8	80	54

Table 1 (Continued)

Tree No.	Quadrant	First Application			Second Application		
		ℓ/ha	g AI/ha	Drop/cm <sup>2</sup>	ℓ/ha	g AI/ha	Drops/cm <sup>2</sup>
7	N	5.0	84	59	5.1	86	46
	E	3.8	64	59	4.2	71	31
	S	2.5	42	26	2.3	39	30
	W	3.8	64	51	8.8	148	62
	Avg.	<u>3.78</u>	<u>63</u>	<u>49</u>	<u>5.1</u>	<u>85</u>	<u>42</u>
8	N	7.0	118	75	3.0	50	38
	E	3.0	50	48	8.1	136	76
	S	3.5	59	30	3.8	64	51
	W	3.4	57	65	7.7	129	87
		<u>4.22</u>	<u>70</u>	<u>54</u>	<u>5.65</u>	<u>94</u>	<u>63</u>
Soil	N	2.4	40	33	3.2	54	38
	E	4.3	72	43	3.3	55	25
	S	1.7	29	23	2.8	47	35
	W	3.5	59	40	1.9	32	18
	Centre	<u>3.9</u>	<u>66</u>	<u>40</u>	<u>3.9</u>	<u>66</u>	<u>37</u>
	<u>3.16</u>	<u>53</u>	<u>36</u>	<u>3.0</u>	<u>50</u>	<u>31</u>	