APPENDIX A
CONTACT PHYTOTOXICITY RESULTS

Table 25: Contact phytotoxicity caused by 0.24 µl of triclopyr product (at 0.32, 1.6 and 3.2 % a.e.) and alternative formulations onto abaxial and adaxial leaf surfaces of red maple.

	No.	Time	0.32% a.e.		1.6% a.e.		3.2% a.e.	
		(hrs)	AD	AB	AD	AB	AD	AB
Garlon 4	1	2	0	0	0	0	0	0
		4	0	0.3	0	0	0	0
		6	0	0.3	0	0.7	0	0
		8	0	0.7	0	1	0	0.3
		24	0	0.7	0	1.3	1	1.3
Garlon 3A	2	2	0	0	0	0	0	0
		4	0	0	0	0.7	0	0
		6	0	0	0	1.3	0.7	0
		8	0	0.3	0	2	1.7	1.5
		24	0	.7	0	2	1.7	2
Triclopyr TEA + Seq. (TTEA)	3	2	0	0	0	0	0	0
		4	0	0	0.7	0.3	0.3	0.3
		6	0.3	0.3	0.7	0.7	0.7	1.3
		8	0.3	0.7	1	1.3	0.7	1.7
		24	0.7	1.3	1.3	2	1.7	2
TTEA + n-octyl pyrrolidone + Silwet 408	4	2	0	0	0	0	0	0
		4	0	0	0	0	0	0
		6	0	0	0	0	0	1
		8	0	0	0	0	0	1.3
		24	0	0	0.3	0	0.3	2
TEA + n-octyl pyrrolidone + Silwet L-77	5	2	0	0	0	0	0	0
		4	0	0	0	0	0	1
		6	0	0	0.3	0	0	1
		8	0	0	0.3	0	0	1.7
		24	0	0	0.7	0.3	0	1.7
TTEA + alcohol ethoxylate + Silwet 408	6	2	0	0	0	0	0	0.7
		4	0	0	0	0	0.3	1.3
		6	0	0	0	0	0.7	2
		8	0	0	0	0	0.7	2
		24	0.3	0	0	0	1.3	2
TTEA + alcohol ethoxylate + Silwet L-77	7	2	0	0	0	0	0.3	0
		4	0	0	0	0	0.7	1
		6	0	0	0	0	0.7	1.5
		8	0	0	0	0	0.7	2
		24	0	0	0	0	0.7	2
TTEA + alkylphenolic glycol ether + Silwet 408	8	2	0	0	0	0	0	0
		4	0	0	0	0.3	0	0
		6	0	0	0	0.3	0.7	0
		8	0	0	0	0.3	1	0.5
		24	0	0	0.5	0.7	1	0.5
TTEA + alkylphenolic glycol ether + Silwet L-77	9	2	0	0	0	0	0	0
		4	0	0	0	0	0	0
		6	0	0	0	0	0	1
		8	0	0	0	0	0.7	1.3
		24	0	0	0	0	0.7	1.3
TTEA + Silwet 408	10	2	0	0	0	0	0	0
		4	0	0	0	0	0	0
		6	0	0	0	0	0	0.7
		8	0	0	0	0	0	1
		24	0	0	0	1	0	1.3
TTEA + Silwet L-77	11	2	0	0	0	0	0	0
		4	0	0	0	0	0.3	0.7
		6	0	0	0.3	0.7	0.3	1
		8	0	0	0.3	0.7	0.3	1.3
		24	0.3	0.3	0.3	1.7	0.7	2

results mean of 3 observations

Table 26: Contact phytotoxicity caused by 4.0 µl of triclopyr product (at 0.32, 1.6 and 3.2 % a.e.) and alternative formulations onto abaxial and adaxial leaf surfaces of red maple.

	No.	Time (hrs)	0.32% a.e.		1.6% a.e.		3.2% a.e.	
			AD	AB	AD	AB	AD	AB
Garlon 4	1	2	0	0.3	0	0.7	0	1
		4	0	0.7	0	2	0	2
		6	0.3	1.7	0.3	2	0	2
		8	0.3	2	0.3	2	0	2
		24	0.7	2	1.3	2	1.3	2
Garlon 3A	2	2	0	0.3	0	1	0	1
		4	0	0.3	0	1.3	0.7	1.7
		6	0	1.3	0	2	1.3	2
		8	0	1.7	0.7	2	1.3	2
		24	0	2	1	2	1.7	2
Triclopyr TEA + Seq. (TTEA)	3	2	0	ND	0	0	0	0
		4	0	ND	0	0	0.3	0
		6	0	ND	0	0.7	0.7	1
		8	0.3	ND	1.3	1	1.3	1.3
		24	0.7	ND	1.7	1.3	2	2
TTEA + n-octyl pyrrolidone + Silwet 408	4	2	0	0	0	0	0	0
		4	0	0	0	0	0	2
		6	0	0	0	0.3	0	2
		8	0	0	0	0.7	0	2
		24	0	0	0.7	2	0.3	2
TTEA + n-octyl pyrrolidone + Silwet L-77	5	2	0	0	0	0.7	0	0.3
		4	0	0	0	1	0	1.7
		6	0	0	0	1.7	0	2
		8	0	0	0	1.7	0.3	2
		24	0	0	1.3	2	0.7	2
TTEA + alcohol ethoxylate + Silwet 408	6	2	0	0	0	0	0	1
		4	0	0	0	0.7	0	2
		6	0	0	0	1	0	2
		8	0	0	0	1	0	2
		24	0	0	0.3	1.3	1	2
TTEA + alcohol ethoxylate + Silwet L-77	7	2	0	0	0	0	0	1.5
		4	0	0	0	0.3	1	2
		6	0	0	0	1.7	1	2
		8	0	0.3	0.7	1.7	1	2
		24	0	0.7	0.7	1.7	2	2
TTEA + alkylphenolic glycol ether + Silwet 408	8	2	0	0	0	0	0	1.3
		4	0	0.3	0	0.3	0.3	2
		6	0	0.7	0	0.7	0.7	2
		8	0	0.7	0.3	0.7	0.7	2
		24	0	0.7	1.3	2	0.7	2
TTEA + alkylphenolic glycol ether + Silwet L-77	9	2	0	0	0	0	0	0
		4	0	0	0	1.3	0	2
		6	0	0	0	1.3	0.7	2
		8	0.3	0.3	0.3	1.3	1.3	2
		24	0.7	0.7	1.3	2	1.3	2
TTEA + Silwet 408	10	2	0	0	0	0	0	0.3
		4	0	0	0	0	0.3	0.7
		6	0	0	0.3	1	0.3	1.7
		8	0	0	0.7	1	0.3	1.7
		24	0	0	0.7	2	0.7	2
TTEA + Silwet L-77	11	2	0	0	0	0	0	0.7
		4	0.3	0	0.7	1	0.7	1.3
		6	0.3	0.3	1	2	0.7	2
		8	0.3	0.7	1	2	1	2
		24	1	1	2	2	1.3	2

results mean of 3 observations

ND = not done, as these droplets would not adhere to the abaxial surface of red maple

Table 27: Contact phytotoxicity caused by 0.24 µl of triclopyr product (at 0.32, 1.6 and 3.2 % a.e.) and alternative formulations onto abaxial and adaxial leaf surfaces of sweetgum.

	No.	Time (hrs)	0.32% a.e.		1.6% a.e.		3.2% a.e.	
			AD	AB	AD	AB	AD	AB
Garlon 4	1	2	0	0	0	0	0	0.7
		4	0	0	0	0	0	1
		6	0	0	0	0.3	0	1
		8	0	0	0	0.3	0	1.7
		24	0	0	0	0.3	0	2
Garlon 3A	2	2	0	0	0	0	0	0
		4	0	0	0	0	0	0
		6	0	0	0	0.3	0	0
		8	0	0	0	0.3	0	0.7
		24	0	0	0	0.3	0	1
Triclopyr TEA + Seq. (TTEA)	3	2	0	0	0	0	0	0
		4	0	0	0	0	0	0
		6	0	0	0	0	0	0.7
		8	0	0	0	0.3	0	1
		24	0	0	0.3	0.3	0.7	1.7
TTEA + n-octyl pyrrolidone + Silwet 408	4	2	0	0	0	0.7	0	1.7
		4	0	0	0	1.3	0	1.7
		6	0	0	0	1.3	0	2
		8	0	0	0	1.7	0.3	2
		24	0	0	0	1.7	0.3	2
TTEA + n-octyl pyrrolidone + Silwet L-77	5	2	0	0	0	0.3	0	0.7
		4	0	0	0	0.7	0	1.3
		6	0	0	0	1	0	1.3
		8	0	0.3	0	1.3	0	1.3
		24	0	0.7	0	1.3	0	1.7
TTEA + alcohol ethoxylate + Silwet 408	6	2	0	0	0	0.3	0	0.7
		4	0	0.3	0	1	0	1.7
		6	0	0.3	0	1.3	0	1.7
		8	0	0.3	0	1.3	0	2
		24	0	0.7	0	1.7	0.7	2
TTEA + alcohol ethoxylate + Silwet L-77	7	2	0	0	0	0.3	0	2
		4	0	0.3	0	1	0	2
		6	0	0.3	0	1	0	2
		8	0	0.3	0	1.3	0	2
		24	0	0.7	0	1.3	1	2
TTEA + alkylphenolic glycol ether + Silwet 408	8	2	0	0	0	0.3	0	0.7
		4	0	0	0	0.3	0	1.7
		6	0	0	0	0.3	0	2
		8	0	0	0	0.7	0	2
		24	0	0	0	2	0	2
TTEA + alkylphenolic glycol ether + Silwet L-77	9	2	0	0	0	1	0	0.7
		4	0	0	0	1.3	0	2
		6	0	0	0	1.3	0	2
		8	0	0	0	1.3	0	2
		24	0	0	0	2	0.3	2
TTEA + Silwet 408	10	2	0	0	0	0	0	0.3
		4	0	0	0	0.7	0	1
		6	0	0	0.3	1	0	1.3
		8	0	0	0.3	1.3	0	1.3
		24	0	0.3	0.7	1.7	0.3	1.7
TTEA + Silwet L-77	11	2	0	0	0	0.3	0	1
		4	0	0	0	1	0	1.3
		6	0	0	0	1.3	0	1.3
		8	0	0	0	1.3	0	1.7
		24	0	0	0	1.7	0.3	1.7

results mean of 3 observations

Table 28: Contact phytotoxicity caused by 4.0 µl of triclopyr product (at 0.32, 1.6 and 3.2 % a.e.) and alternative formulations onto abaxial and adaxial leaf surfaces of sweetgum.

	No.	Time	0.32% a.e.		1.6% a.e.		3.2% a.e.	
		(hrs)	AD	AB	AD	AB	AD	AB
Garlon 4	1	2	0	0	0	0.3	0	1.3
		4	0	0	0	0.3	0	1.7
		6	0	0.3	0	0.7	0	1.7
		8	0	0.3	0	1	0	1.7
		24	0	0.7	0	1.3	0	2
Garlon 3A	2	2	0	0	0	0	0	0
		4	0	0	0	0	0	1.3
		6	0	0	0	0.3	0	1.7
		8	0	0	0	0.7	0	2
		24	0	1	0.3	1.3	0	2
Triclopyr TEA + Seq. (TTEA)	3	2	0	0	0	0.3	0	1
		4	0	0	0	0.7	0	1
		6	0	0	0	0.7	0.3	1
		8	0	0	0	1.3	0.3	1
		24	0	0	0.3	1.7	0.7	1.7
TTEA + n-octyl pyrrolidone + Silwet 408	4	2	0	0	0	1	0	2
		4	0	0	0	1.5	0	2
		6	0	0	0	2	0	2
		8	0	0	0	2	0	2
		24	0	1.3	0	2	0.3	2
TTEA + n-octyl pyrrolidone + Silwet L-77	5	2	0	0	0	1.3	0	1.3
		4	0	0	0	2	0	2
		6	0	0.3	0	2	0	2
		8	0	0.3	0	2	0	2
		24	0	0.7	0	2	0	2
TTEA + alcohol ethoxylate + Silwet 408	6	2	0	0	0	0.3	0	1
		4	0	0	0	1	0	2
		6	0	0.7	0	1.7	0	2
		8	0	0.7	0	2	0	2
		24	0.3	1.3	0	2	1	2
TTEA + alcohol ethoxylate + Silwet L-77	7	2	0	0	0	0.3	0	1.3
		4	0	0	0	1.3	0	1.7
		6	0	0.3	0	1.3	0	1.7
		8	0	0.3	0	1.7	0	1.7
		24	0	1	0	2	0.7	2
TTEA + alkylphenolic glycol ether + Silwet 408	8	2	0	0	0	1.7	0	2
		4	0	0	0	2	0	2
		6	0	0	0	2	0	2
		8	0	0	0	2	0	2
		24	0	0	0	2	0	2
TTEA + alkylphenolic glycol ether + Silwet L-77	9	2	0.3	0	0	1.3	0	2
		4	0.3	0.3	0	1.7	0	2
		6	0.3	0.3	0	2	0	2
		8	0.3	0.3	0	2	0	2
		24	0.3	0.7	0.3	2	0	2
TTEA + Silwet 408	10	2	0	0	0	0	0	0.7
		4	0	0	0	0.7	0.3	1
		6	0	0	0	1	0.7	1.7
		8	0	0.7	0.3	1.7	0.7	1.7
		24	0	0.7	0.3	2	1.7	2
TTEA + Silwet L-77	11	2	0	0	0	1	0	1
		4	0	0	0	1	0	2
		6	0	0	0	1.7	0	2
		8	0	0	0	1.7	0.3	2
		24	0.3	0.7	0.3	1.7	1	2

results mean of 3 observations

Table 29: Contact phytotoxicity caused by 0.24 µl of triclopyr product (at 0.32, 1.6 and 3.2 % a.e.) and alternative formulations onto abaxial and adaxial leaf surfaces of red oak.

	No.	Time	0.32% a.e.		1.6% a.e.		3.2% a.e.	
		(hrs)	AD	AB	AD	AB	AD	AB
Garlon 4	1	2	0	0	0	0.3	0	0
		4	0	0.3	0	0.7	0	0
		6	0	0.3	1	1.3	0.3	0.7
		8	0	0.7	1	1.3	0.7	1.3
		24	0	1.3	1.7	1.3	1.3	1.7
Garlon 3A	2	2	0	0	0	0.3	0	0
		4	0	0	0.3	1.3	0	0
		6	0	0	0.7	1.7	0	0.3
		8	0	0	0.7	1.7	1.3	1.3
		24	0	0	1	1.7	1.3	1.3
Triclopyr TEA + Seq. (TTEA)	3	2	0	0	0	0	0	0.3
		4	0	0	0	0.7	0	0.3
		6	0	0.3	0.7	0.7	0.3	0.7
		8	0.3	0.3	1.3	1.3	1	1
		24	0.7	0.7	2	1.7	1.7	1.3
TTEA + n-octyl pyrrolidone + Silwet 408	4	2	0	0	0	0	0	0
		4	0	0	0	0.7	0	0.3
		6	0	0.3	0	0.7	0	0.3
		8	0	0.3	0	0.7	0.3	0.3
		24	0.3	0.7	0	1	1.7	2
TTEA + n-octyl pyrrolidone + Silwet L-77	5	2	0	0	0	0	0	0
		4	0	0	0	0.3	0	0
		6	0	0.7	0	1	0.3	0.7
		8	0	0.7	0	1	0.3	1.7
		24	0	0.7	0	2	1.3	2
TTEA + alcohol ethoxylate + Silwet 408	6	2	0	0	0	0	0	0.3
		4	0	0	0.3	0.3	0.7	1
		6	0	0	0.3	0.7	1.7	2
		8	0	0.3	0.7	1	2	2
		24	0	0.7	0.7	1.7	2	2
TTEA + alcohol ethoxylate + Silwet L-77	7	2	0	0	0	0	0	1
		4	0	0.3	0	0.3	0.3	1.7
		6	0	0.3	0	1	1	2
		8	0	0.3	0.3	1.3	1	2
		24	0	0.7	0.3	1.3	2	2
TTEA + alkylphenolic glycol ether + Silwet 408	8	2	0	0	0	0.3	0	0
		4	0	0.3	0	0.7	0.3	0
		6	0	0.3	0	0.7	0.7	0.3
		8	0	0.3	0	0.7	1.3	1.3
		24	0.3	0.7	0	2	1.3	1.7
TTEA + alkylphenolic glycol ether + Silwet L-77	9	2	0	0	0	0	0	0
		4	0	0	0	0.3	0.3	0
		6	0	0	0	1	0.7	0.3
		8	0	0	0	1	1	1.3
		24	0.3	0.7	0	1.7	1.3	1.3
TTEA + Silwet 408	10	2	0	0	0	0	0	0
		4	0	0	0	0	0	0
		6	0	0	0	0.3	0	0
		8	0	0	0	0.3	0	0.7
		24	0	0	0.3	0.3	0	1.3
TTEA + Silwet L-77	11	2	0	0	0	0	0	0
		4	0	0	0	0	0	0
		6	0	0	0	0.7	0	0
		8	0	0	0	0.7	0	0.7
		24	0.3	0.3	0.7	1.7	0.7	1

results mean of 3 observations

Table 30: Contact phytotoxicity caused by 4.0 µl of triclopyr (at 0.32, 1.6 and 3.2 % a.e.) and alternative formulations onto abaxial and adaxial leaf surfaces of red oak.

	No.	Time	0.32% a.e.		1.6% a.e.		3.2% a.e.	
		(hrs)	AD	AB	AD	AB	AD	AB
Garlon 4	1	2	0	0.3	0	0.3	0	0
		4	0	1	0	1.7	0	0
		6	0	1.3	1	1.7	0.3	2
		8	0	1.3	1	1.7	0.7	2
		24	0.3	1.3	1.3	1.7	1	2
Garlon 3A	2	2	0	0	0	0.5	0	0
		4	0	0.7	0	1.5	0	0
		6	0	0.7	0.3	1.5	0.3	0.7
		8	0.3	0.7	0.3	1.5	1.7	2
		24	0.3	1	1.3	1.5	2	2
Triclopyr TEA + Seq. (TTEA)	3	2	0	0	0	0	0	0
		4	0	0	0	0.3	0	0.7
		6	0	0.7	0	1.3	0.7	1
		8	0	0.7	0.7	1.7	1.3	1
		24	0.3	1	1.3	2	2	1.3
TTEA + n-octyl pyrrolidone + Silwet 408	4	2	0	0	0	0	0	1
		4	0	0.3	0	0	0	1.7
		6	0.3	0.3	0	0.3	0	1.7
		8	0.3	0.3	0	0.7	0.3	2
		24	1.3	1.3	0.3	1.3	0.7	2
TTEA + n-octyl pyrrolidone + Silwet L-77	5	2	0	0	0	0	0	0
		4	0	0	0	0.3	0	0.3
		6	0	0.3	0	0.7	0	1
		8	0	0.3	0	0.7	0	2
		24	0	0.7	1	1.3	1	2
TTEA + alcohol ethoxylate + Silwet 408	6	2	0	0	0	0	0	0.7
		4	0	0.7	0	0.7	0	1.7
		6	0	0.7	0	1.3	1	2
		8	0	0.7	0	1.3	1	2
		24	0.7	2	0	1.7	1.7	2
TTEA + alcohol ethoxylate + Silwet L-77	7	2	0	0	0	0	0	1
		4	0	0.3	0	0.7	0	1.3
		6	0.3	0.3	0	1	0.7	1.7
		8	0.3	1	0	1	0.7	1.7
		24	1.3	1.3	0	1	1.3	2
TTEA + alkylphenolic glycol ether + Silwet 408	8	2	0	0	0	0	0	0
		4	0	0.3	0	0.3	0	0
		6	0	0.7	0	0.7	0	0.7
		8	0	0.7	0	0.7	0	1.7
		24	0.7	1	0.7	2	1.3	2
TTEA + alkylphenolic glycol ether + Silwet L-77	9	2	0	0	0	0	0	0
		4	0	0.3	0	0.3	0	0.3
		6	0	0.3	0	1	0.7	1.3
		8	0	0.7	0	1	1	1.3
		24	0.7	1.3	0.7	1.3	1.7	1.3
TTEA + Silwet 408	10	2	0	0	0	0	0	0
		4	0	0	0	0	0	0
		6	0	0	0	0.7	0	0
		8	0	0	0	0.7	0	0.7
		24	0	0.3	0.7	1.3	0	1.3
TTEA + Silwet L-77	11	2	0	0	0	0	0	0
		4	0	0	0	0	0	0.3
		6	0	0	0	0	0	0.3
		8	0	0	0	0.3	0	0.3
		24	0.3	0.3	0.3	1.3	0.7	1.3

results mean of 3 observations