UW – Madison Weed Science Renz Lab

2016 Evaluation of Brush Honeysuckle Control with Method – 2018 Update

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Objective:

Evaluate effectiveness of Method (aminocyclopyrachlor) at controlling Honeysuckle species (*Lonicera spp.*) as compared to other herbicides labelled for foliar control of invasive shrub species.

Summary:

At 58 Days After Treatment (DAT), Honeysuckle defoliation was greatest in the medium and high Method rate (76-99%), and Crossbow treatment (99%). By the following spring (268 DAT), the highest Honeysuckle control was with treatments containing Method (92-100%), Milestone at the high concentration (83%), and Crossbow (100%).

At 365 DAT, highest Honeysuckle control was found in Method low concentration treatment (97%), Method medium concentration treatment (97.9%), Method high concentration treatment (100%), Milestone high concentration treatment (97.9%), and Crossbow treatment (98.6%). The lower concentration of Milestone had significant regrowth compared to other treatments. By two years after application (676 DAT), highest Honeysuckle control persisted with treatments containing Method (95-100%) as well as Milestone at the high concentration treatment (89%), and Crossbow (100%). Results demonstrate that Method is as effective as other standard herbicides at honeysuckle control.

Research Plot Information:

Plot Dimensions: Individual Shrub

Design: Randomized Complete Block, 7 blocks

Soil Type: Richwood Silt Loam, 2-6% slope

Notes:

Treatments applied to individual plants (average height 7 feet, average diameter 3 feet) until wet, but not beyond saturation (estimated 50 gallons per acre).

Herbicide Treatments:

Treatment Number	Treatment	Rate
1	UTC	-
2	Method 240 SL Methylated Seed Oil (MSO)	0.25% volume/volume (v/v) 1% v/v
3	Method 240 SL MSO	0.5% v/v 1% v/v
4	Method 240 SL MSO	1% v/v 1% v/v
5	Milestone MSO	0.25% v/v 1% v/v
6	Milestone MSO	0.5% v/v 1% v/v
7	Crossbow MSO	1.5% v/v 1% v/v

Herbicide Application:

Date: August 1st, 2016

Equipment: Backpack sprayer (50 GPA)

Nozzles: One Flat Tip XR TeeJet 11002 VS

Weather Data:

Weather Station	KWISAUKC3
Temperature	79°F
Wind Speed and Direction	2 MPH E
Relative Humidity	72%
Cloud Cover	65%
Previous Rain Event Within 48 Hours	-
When ≥ 0.25 inches of precipitation occurred after treatment	08.04.18: 0.70 inches

Index of Ratings and Results

Results:

58 DAT – September 28th, 2016

Trt. No.	Treatment	Rate	Honeysuckle Leaf Drop (%)	Honeysuckle Chlorosis (%)
1	UTC	-	0c	0d
2	Method 240 SL MSO	0.25% v/v 1% v/v	40b	73.6ab
3	Method 240 SL MSO	0.5% v/v 1% v/v	76.4a	85.7ab
4	Method 240 SL MSO	1% v/v 1% v/v	99.3a	99.9a
5	Milestone MSO	0.25% v/v 1% v/v	37.1b	33.6c
6	Milestone MSO	0.5% v/v 1% v/v	45.7b	59.3b
7	Crossbow MSO	1.5% v/v 1% v/v	99.3a	85.7ab
Statistics[1]				
Least Significant Difference (LSD) P=.05			19.05	22.66
Standard Deviation			17.66	21.01
Coefficient of Variation (CV)			31.06	33.6
Treatment Prob(F)			0.001	0.246

Note: Means followed by same letter or symbol do not significantly differ (P=.05, Student-Newman-Keuls).

[1] All statistical analyses were conducted in ARM software and assumptions of ANOVA were not evaluated.

71 DAT – October 11th, 2016

Trt. No.	Treatment	Rate	Honeysuckle Height (ft)	Honeysuckle Radius (ft)
1	UTC	-	7.549 -	3.226 -
2	Method 240 SL MSO	0.25% v/v 1% v/v	7.454 -	3.573 -
3	Method 240 SL MSO	0.5% v/v 1% v/v	7.083 -	3.109 -
4	Method 240 SL MSO	1% v/v 1% v/v	7.273 -	2.964
5	Milestone MSO	0.25% v/v 1% v/v	7.204 -	3.061 -
6	Milestone MSO	0.5% v/v 1% v/v	7.143 -	2.737 -
7	Crossbow MSO	1.5% v/v 1% v/v	7.573 -	2.82 -
Statistics				
Least Significant Difference (LSD) P=.05			1.1045	0.7678
Standard Deviation			1.0239	0.7117
Coefficient of Variation (CV)			13.98	23.18
Treatment Prob(F)			0.311	0.844

Note: Means followed by same letter or symbol do not significantly differ (P=.05, Student-Newman-Keuls).

268 DAT – April 26th, 2017

Trt. No.	Treatment	Rate	Honeysuckle Control (%)	Honeysuckle Regrowth (%)	Grass Species Injury (%)
1	UTC	-	0c	93.6a	0 -
2	Method 240 SL MSO	0.25% v/v 1% v/v	96.1a	5.1cd	0 -
3	Method 240 SL MSO	0.5% v/v 1% v/v	92.6a	5.1cd	0 -
4	Method 240 SL MSO	1% v/v 1% v/v	100a	2.1cd	0 -
5	Milestone MSO	0.25% v/v 1% v/v	67.1b	30b	0 -
6	Milestone MSO	0.5% v/v 1% v/v	83.3a	15.9c	0 -
7	Crossbow MSO	1.5% v/v 1% v/v	99.9a	0.1d	0 -
Statistics					
Least Significant Difference (LSD) P=.05			12.57	11.04	.
Standard Deviation			11.65	10.24	0
Coefficient of Variation (CV)			15.13	47.15	0
Treatment Prob(F)			0.001	0.07	1

Note: Means followed by same letter or symbol do not significantly differ (P=.05, Student-Newman-Keuls).

365 DAT – August 1st, 2017

Trt. No.	Treatment	Rate	Honeysuckle Control (%)	Honeysuckle Regrowth (%)	Grass Species Injury (%)
1	UTC	-	0c	98.6a	0 -
2	Method 240 SL MSO	0.25% v/v 1% v/v	97a	2.9c	0 -
3	Method 240 SL MSO	0.5% v/v 1% v/v	97.9a	2.9c	0 -
4	Method 240 SL MSO	1% v/v 1% v/v	100a	0c	0 -
5	Milestone MSO	0.25% v/v 1% v/v	54.3b	47.1b	0 -
6	Milestone MSO	0.5% v/v 1% v/v	97.9a	1.4c	0 -
7	Crossbow MSO	1.5% v/v 1% v/v	98.6a	2.1c	0 -
Statistics					
Least Significant Difference (LSD) P=.05			15.33	16.09	.
Standard Deviation			14.21	14.91	0
Coefficient of Variation (CV)			18.23	67.36	0
Treatment Prob(F)			0.001	0.001	1

Note: Means followed by same letter or symbol do not significantly differ (P=.05, Student-Newman-Keuls).

676 DAT - June 8th, 2018

Trt. No.	Treatment	Rate	Honeysuckle Control (%)
1	UTC	-	0c
2	Method 240 SL MSO	0.25% v/v 1% v/v	95a
3	Method 240 SL MSO	0.5% v/v 1% v/v	97.9a
4	Method 240 SL MSO	1% v/v 1% v/v	100a
5	Milestone MSO	0.25% v/v 1% v/v	67.1b
6	Milestone MSO	0.5% v/v 1% v/v	89.3a
7	Crossbow MSO	1.5% v/v 1% v/v	100a
Statistics			
Least Significant Difference (LSD) P=.05			17.81
Standard Deviation			16.5
Coefficient of Variation (CV)			21.14
Treatment Prob(F)			0.001

Note: Means followed by same letter or symbol do not significantly differ (P=.05, Student-Newman-Keuls).