Extension
UNIVERSITY OF WISCONSIN–MADISON

ID #18-9

UW – Madison Weed Science Renz Lab

Evaluation of Best Management Practices

to

Speed Pollinator Planting Establishment (Janesville, Wisconsin)

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Objective:

Develop Best Management Practices (BMPs) improving establishment success or reducing the time needed for pollinator-focused native vegetation to dominate. Combinations of common management practices, including cover cropping, mowing timing, mowing frequency, and residual herbicide use are included in this study.

Summary:

Almost all treatments resulted in similar forb cover by the end of 2018. Because native vegetation plots tend to have slow establishment in their first growing season after seeding, we expect to see more pronounced differences between treatments during the 2019 growing season. We will also evaluate if treatments affect native species differently.

Research Plot Information:

Plot Dimensions: 10 feet x 30 feet

Design: Randomized Complete Block, 4 blocks

Soil Type: Plano silt loam, 0 to 2 percent slope

Notes:

- Highlighted treatments were mowed late in 2018. Herbicide treatments are planned for 2019. These are referred to as "Late Mow" in the following charts.
- All statistical analyses were conducted in ARM software and assumptions of ANOVA were not evaluated.

Herbicide Treatments:

Treatment Number	Planting Timing (early/late)	Cover Crop (yes/no)	Treatment	Rate
1	Early	Yes	Journey	5.35 fluid ounces/Acre (fl oz/A)
2	Early	Yes	Journey	10.7 fl oz/A
3	Early	Yes	Mow 1x	-
4	Early	Yes	Mow 2x	-
5	Early	Yes	Milestone	5 fl oz/A
6	Early	Yes	Glyphosate	1 pound active ingredient/Acre (lb AE/A)
7	Early	Yes	Esplanade	2 ounces/Acre (oz/A)
8	Early	Yes	Prowl H2O Glyphosate	3 pints/Acre (pt/A) 1 lb AE/A
9	Early	Yes	Control	-
10	Early	No	Journey	5.35 fl oz/A
11	Early	No	Journey	10.7 fl oz/A
12	Early	No	Mow 1x	-
13	Early	No	Mow 2x	-
14	Early	No	Milestone	5.0 fl oz/A
15	Early	No	Glyphosate	1 lb AE/A
16	Early	No	Esplanade Glyphosate	2 oz/A 1 lb AE/A

17	Early	No	Prowl H2O Glyphosate	3 pt/A 1 lb AE/A
18	Early	No	Control	-
19	Late	Yes	Journey	5.35 fl oz/A
20	Late	Yes	Journey	10.7 fl oz/A
21	Late	Yes	Mow 1x	-
22	Late	Yes	Mow 2x	-
23	Late	Yes	Milestone	5.0 fl oz/A
24	Late	Yes	Glyphosate	1 lb AE/A
25	Late	Yes	Esplanade Glyphosate	2 oz/A 1 lb AE/A
26	Late	Yes	Prowl H2O Glyphosate	3 pt/A 1 lb AE/A
27	Late	Yes	Control	-
28	Late	No	Journey	5.35 fl oz/A
29	Late	No	Journey	10.7 fl oz/A
30	Late	No	Mow 1x	-
31	Late	No	Mow 2x	-
32	Late	No	Milestone	5.0 fl oz/A
33	Late	No	Glyphosate	1 lb AE/A
34	Late	No	Esplanade Glyphosate	2 oz/A 1 lb AE/A
35	Late	No	Prowl H2O Glyphosate	3 pt/A 1 lb AE/A
36	Late	No	Control	-

Herbicide Application:

Date: May 7th, 2018, 2:45pm-3:20pm / June 6th, 2018, 1:30pm-2:00pm

Equipment: Backpack sprayer (15 gallons per acre), 10-foot boom

Nozzles: Eight flat tip TeeJet AIXR 110015, 15-foot nozzle spacing

Regulator PSI: 32

Boom PSI: 18

Plants Present/Stage of Development:

05.17.18:

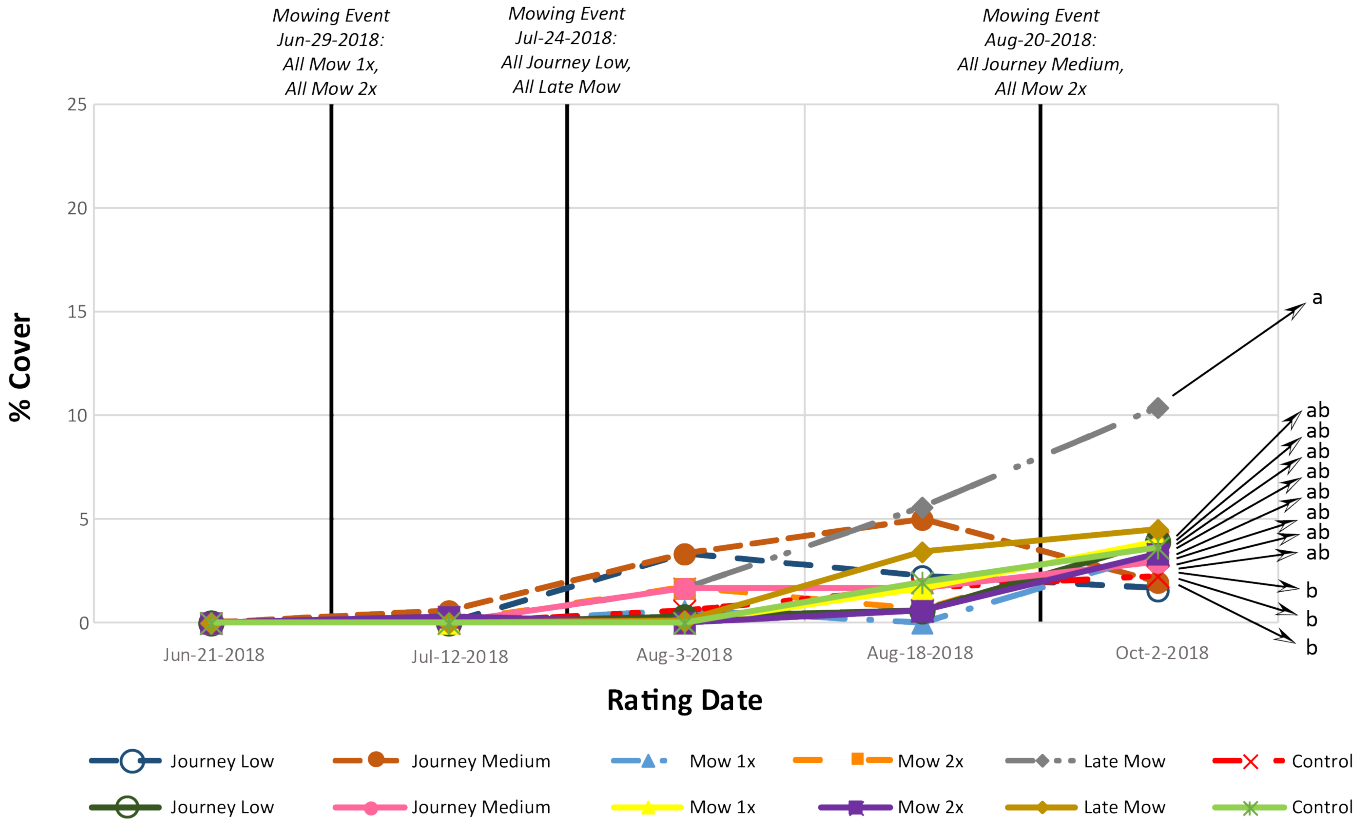
- 5-10% broadleaf cover, mainly Common Dandelion (*Taraxacum officinale*), 1-2 inches

Weather Data:

Weather Station	KWIMILTO4
Temperature	74.5°F / 61°F
Wind Speed and Direction	43% / 84%
Relative Humidity	5 mph N / 4 mph E
Cloud Cover	45% / 70%
Previous Rain Event Within 48 Hours	05.06.18 – 0.05 inches / -
When ≥ 0.25 inches of precipitation occurred after treatment	05.09.18 – 0.59 inches / 06.09.18 – 0.46 inches

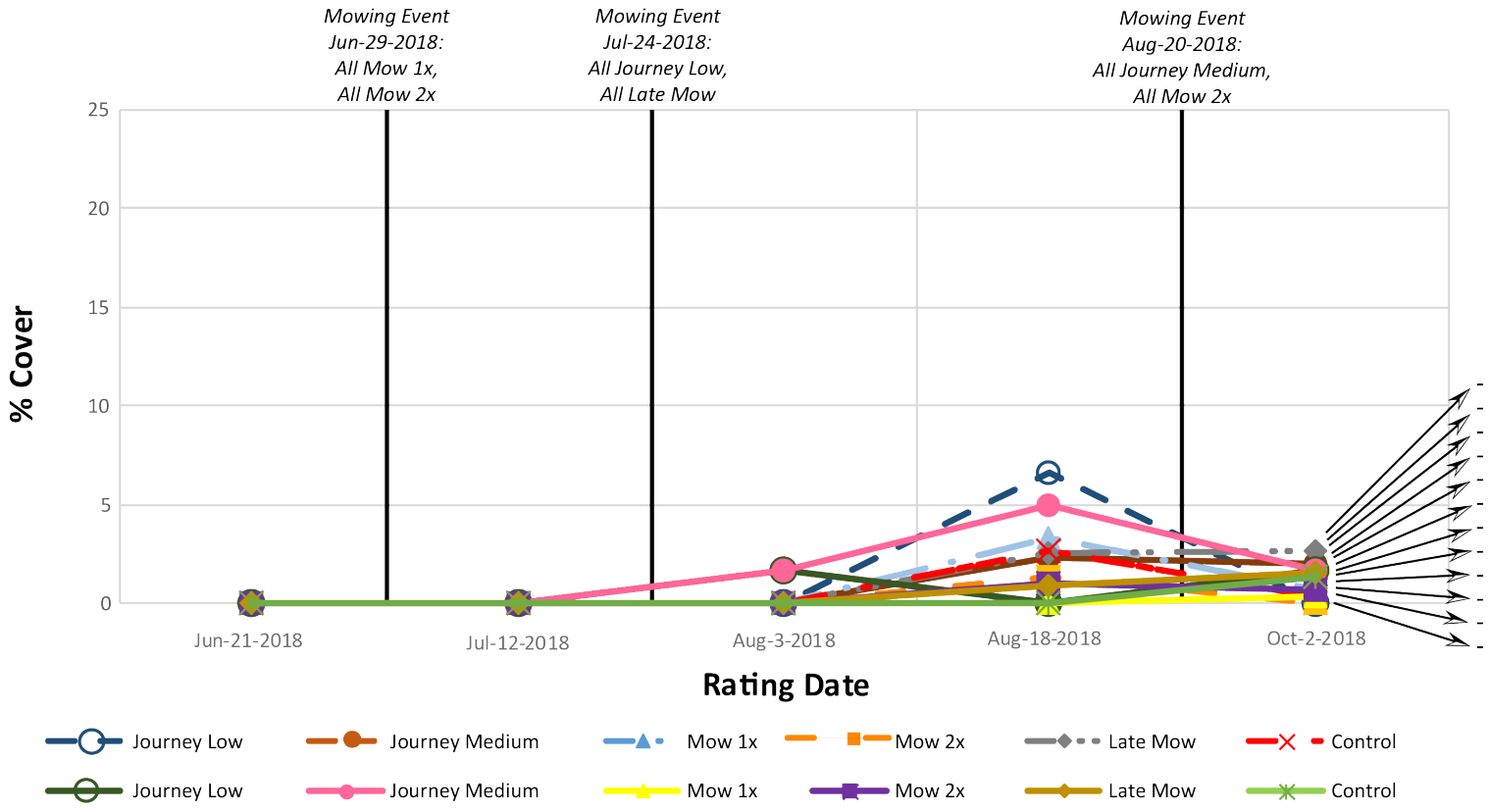
Index of Results

Results:



Notes:
Dashed Lines indicate **non** companion-cropped treatments (top row of legend).
Solid lines indicate companion-cropped treatments (bottom row of legend).
Trendlines indicated by the same letter or symbol do not significantly differ (P=.05, Student-Newman-Keuls).

Early Planting Native Grass Cover



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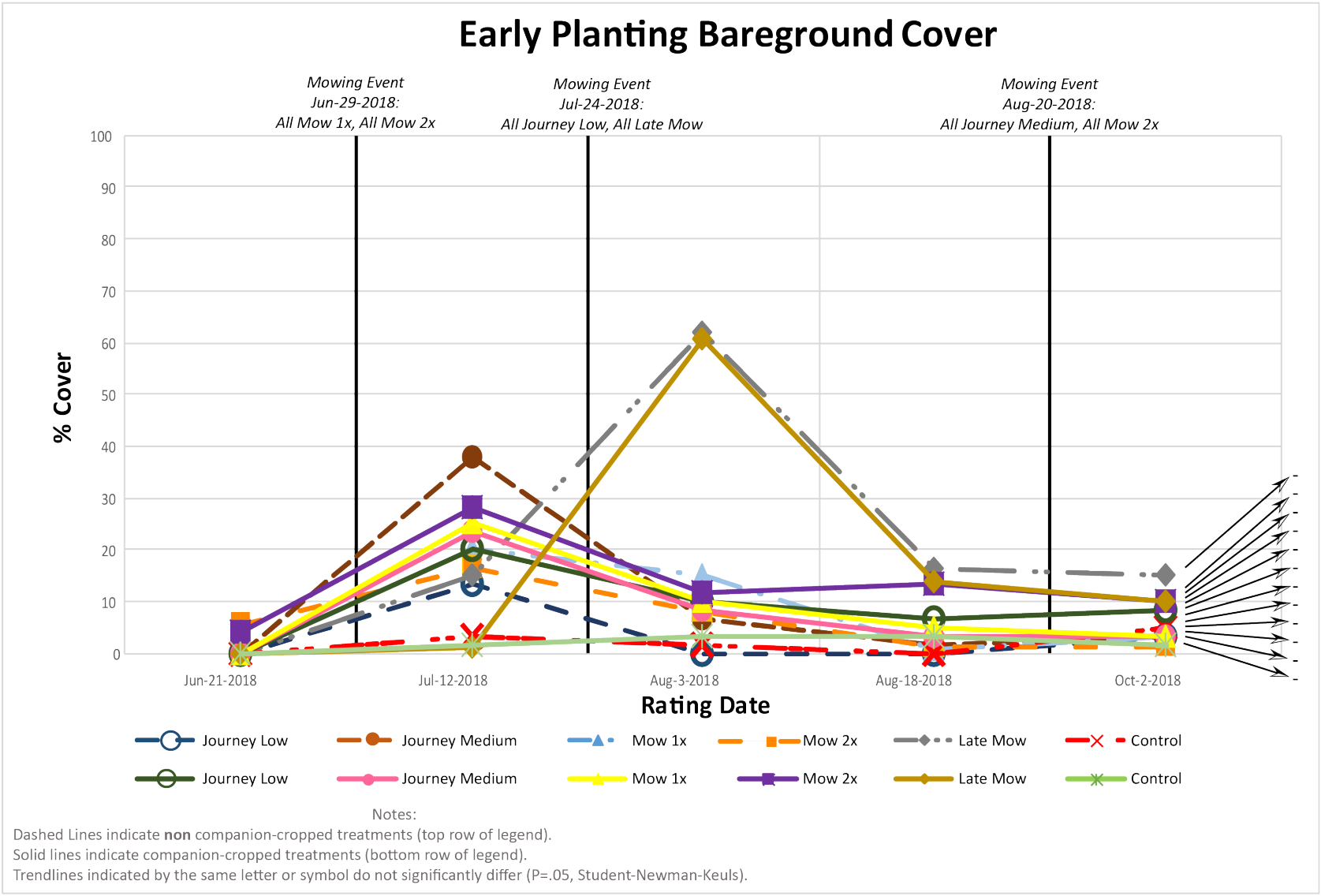

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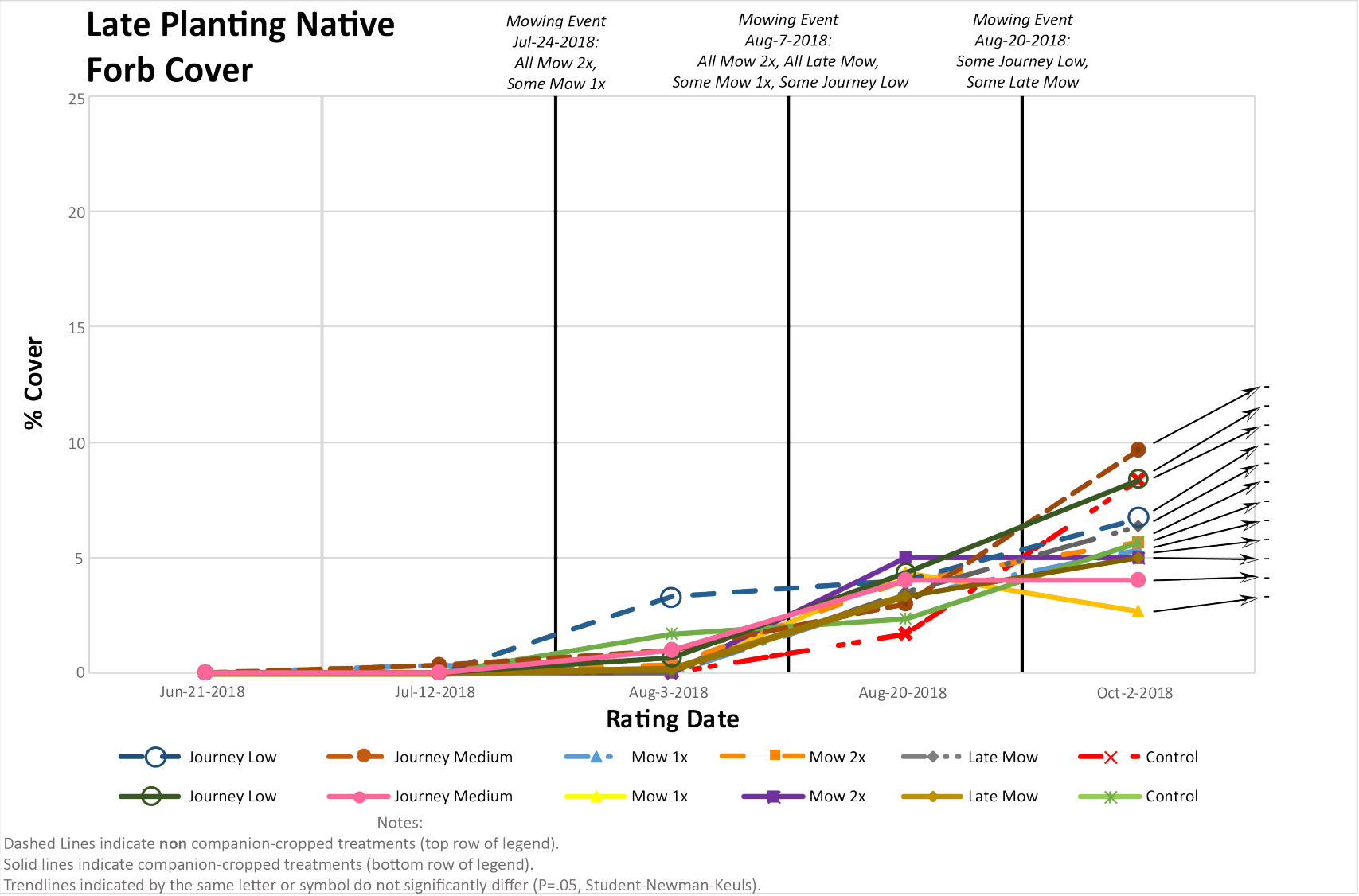

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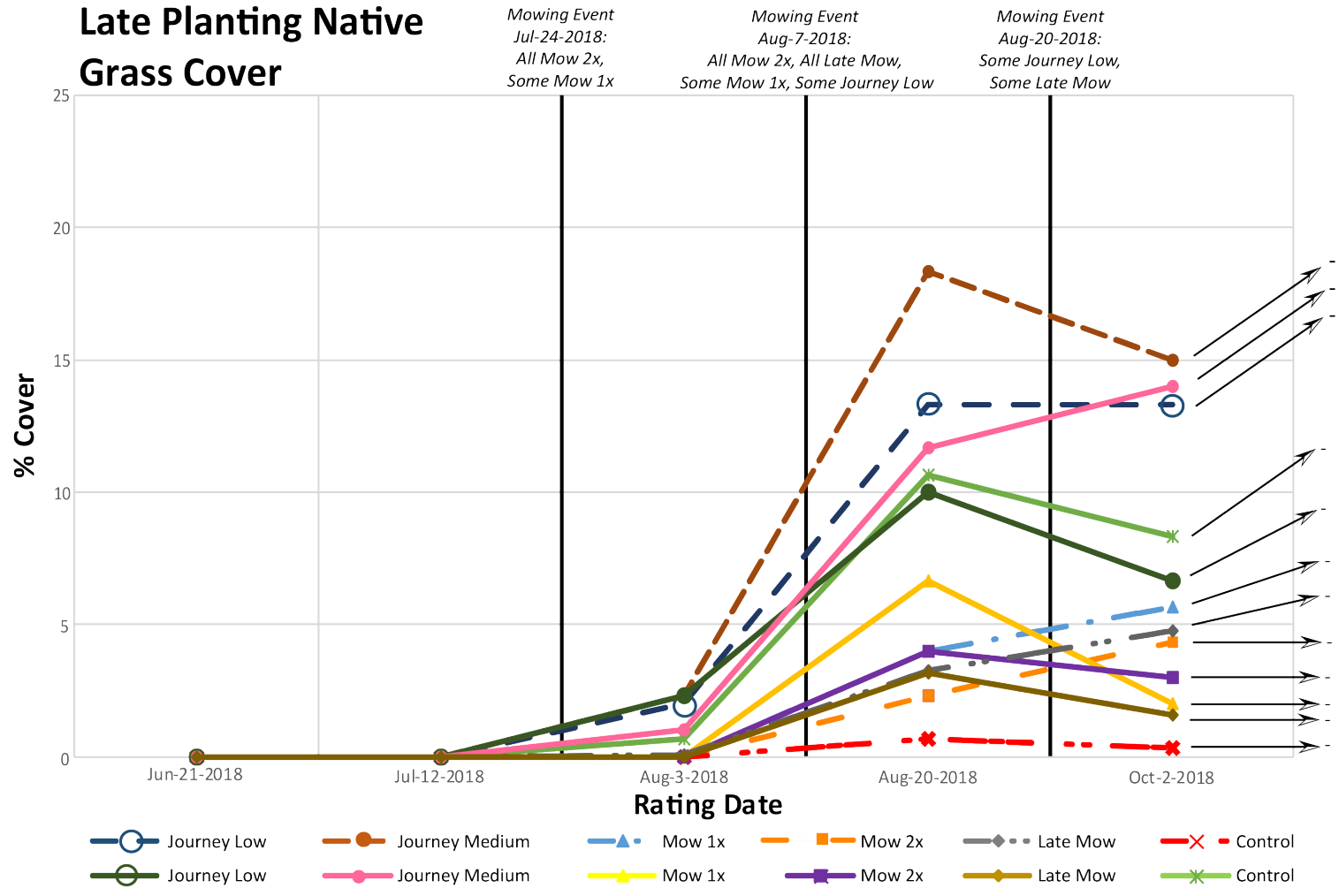

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Late Planting Bareground Cover