

# Velocity<sup>®</sup> PM

POA MANAGEMENT HERBICIDE



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- bispyribac – sodium
- Acetolactate synthase (ALS) inhibitor
  - ✓ Branched-chain amino acids:
    - ✓ valine, leucine, and isoleucine
- Half-life in soil is 3 to 7 days... and in plants it lasts 17 to 21 days
- Most cool-season turf species have good tolerance
- **Very Active** with a low use rate (5 to 45 g ai/A)

Management Program -----< **Velocity** >----- Complete Control



# History

- Initially evaluated as a turf growth regulator
- Discovered the selective POST activity on Poa
- Launched in 2004 (to 2018) for use in turfgrass











Original Plot

99% Annual bluegrass

removed with Velocity in 1 year

3 bentgrass plugs placed in the upper end of plot



2 years later

85% Creeping bentgrass cover  
without seeding





**A close-up of the plot area after it was treated with Velocity PM.**

**The bentgrass is green and vigorously growing while the annual bluegrass has been controlled.**





# Selectivity

1. Based on differential metabolism and movement in the plant.
2. Creeping bentgrass, ryegrass, and fescues, in particular, rapidly metabolize Velocity PM to an immobile, inactive form.
3. Annual bluegrass metabolizes Velocity PM more slowly and translocates the active herbicide to the growing points.





# Additional Benefits

1. Suppression of Dollar Spot
2. Selected Broadleaf Weed Control
3. Poa Seedhead Suppression



# Turfgrass Tolerance

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perennial ryegrass  
creeping bentgrass  
fescues – tall & fine

Kentucky bluegrass

*Poa trivialis*

*Poa annua*

dormant Bermudagrass



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(5 applications)  
0.75 fl oz/A  
14-d interval

Untreated

Dollar Spot Suppression



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Velocity PM Applied Twice in the Fall

Poa Seedhead Suppression



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Goal is to create an  
easy-to-follow  
Poa Management Program





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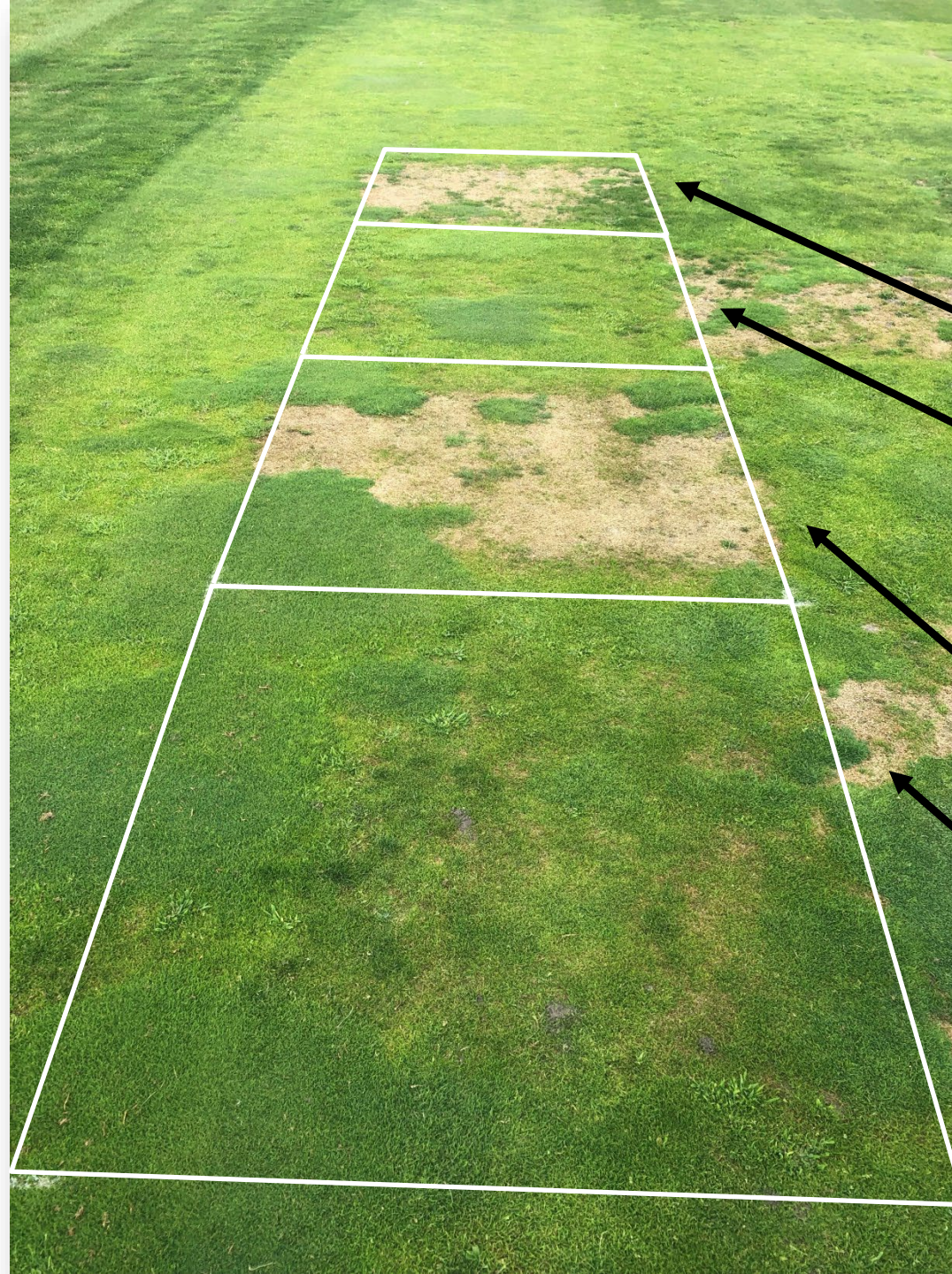
Velocity PM fl oz/A	bispyribac lbs/A	bispyrabac grams/A	Old Velocity 17.6 SG oz/A	Velocity PM ml/A	Velocity PM ml/gallon*
<b>0.38</b>	0.011	5	1	11	0.25
<b>0.75</b>	0.022	10	2	22	0.5
<b>1.1</b>	0.032	15	3	33	0.75
<b>1.5</b>	0.044	20	4	44	1.0
<b>2.25</b>	0.066	30	6	66	1.5
<b>4.5</b>	0.132	60	12	133	3
<b>9</b>	0.264	120	24	266	6

\*Assumes 1 gallon of spray solution covers 1,000 sq ft (44 GPA). Adjust the rate up or down according to the application spray volume (GPA) being used.



## MSU – *Poa annua* in a Ryegrass/Bentgrass Fairway.

- Photo taken Sept. 5, 2019.
- Last app. on August 19, 2019.
- Slow conversion of more Poa to less Poa and less bentgrass to more bentgrass is necessary or preferred when the starting point of Poa is 15% of a turf stand or more.
- This MSU fairway is worst case scenario at approx. 80% Poa.



Each program applied  
**3 times** at 14-day  
intervals.

Velocity PM  
(120 g ai/A = 9 fl oz/A)

Velocity PM  
(30 g ai/A = 2.2 fl oz/A)

Velocity PM  
(60 g ai/A = 4.5 fl oz/A)

Velocity PM  
(15 g ai/A = 1.1 fl oz/A)



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## 5 Keys to Success

- Apply to healthy and actively growing turfgrass – target 70 – 90F
  - warmer/hotter is better for safety and efficacy
- Application Rates
  - Less responsive than expected; 2x rate ~~≠~~ twice control
- Repeat applications over a large single dose
- Application Interval (17-day herbicide)
- Must Stick with the PROGRAM!!!



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## Golf Course Fairways: A Simple, Effective Program

1. Year 1: Slow Conversion in Summer
  - 0.75 fl oz/A, 5 apps (3.75 fl oz/A total), 14-day intervals
  - Tankmix with fungicides, fertilizers, etc. - no issues
2. Year 2: Continue with Slow Conversion in Summer
  - 0.75 fl oz/A, 5 apps, 14-day intervals
3. Year 3: Maintenance Plan – Be Aggressive with Fewer Apps
  - 2.25 fl oz/A, 2 apps (4.5 fl oz/A), 14-day interval

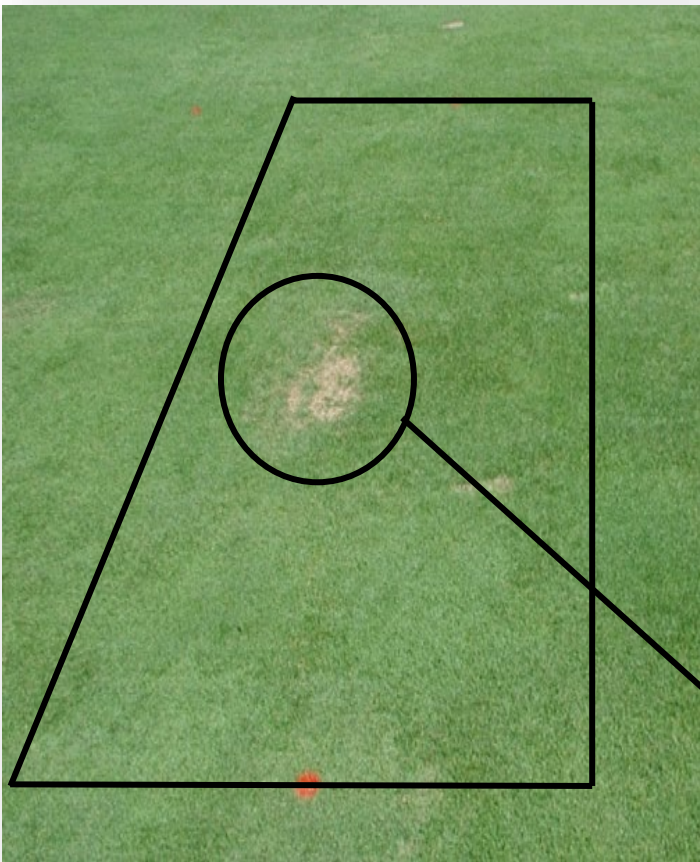
### Goals

1. No bare soil. Slower conversion.
2. Results. Some dead *Poa*.
3. Maintain quality of bentgrass – adding Anuew has resulted in better quality/color.
4. Year 1 – 50% reduction in *Poa*  
Year 2 – remove the rest of the *Poa*  
Year 3 – smoke any new *Poa* with high rates
5. Push growth and competition with N!



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3<sup>rd</sup> Year Rates  
Based on *Poa* Population

Creeping Bentgrass Fairway

2 Velocity PM Applications

14 – 21 day interval

2.25 fl oz/A

***Poa annua* removal**



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## Overseeded and Non-Overseeded Bermudagrass

1. Velocity PM applied to younger Poa provides better overall control.
2. Early Poa Control (newly emerged): apply 0.75 fl oz/A twice on a 14 day interval. Wait at least 30 days after ryegrass seedling emergence before application.
3. Late Poa Control: apply 2.25 fl oz/A two or three times on a 14 day interval. Wait at least 60 days after ryegrass seedling emergence before application.



## *Poa trivialis* Control - Fairway

	Treatment	Rate	Timing
1	Velocity PM	1.1 fl oz/A	ABCD
2	Velocity PM	2.2 fl oz/A	AB
3	Velocity PM	4.5 fl oz/A	A
4	Velocity PM Anuew EZ	1.1 fl oz/A 18 fl oz/A	ABCD
5	PoaCure	52 fl oz/A	BC
6	Untreated		

- Oak Pointe CC, Brighton, MI; Hathaway
- Creeping bentgrass fairway

A = August 4, 2023

B = August 18

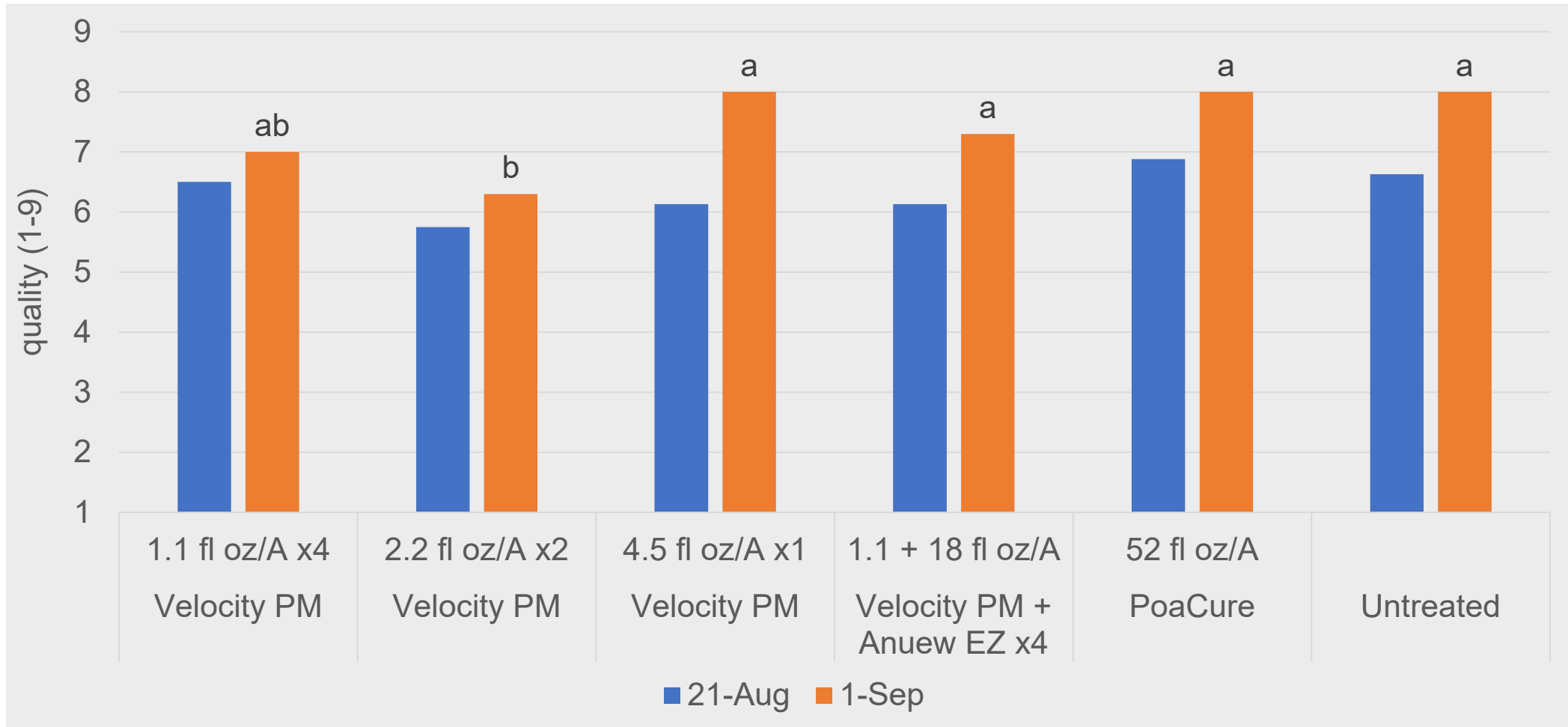
C = September 1

D = September 15



# *Poa trivialis* Control – Turf Quality

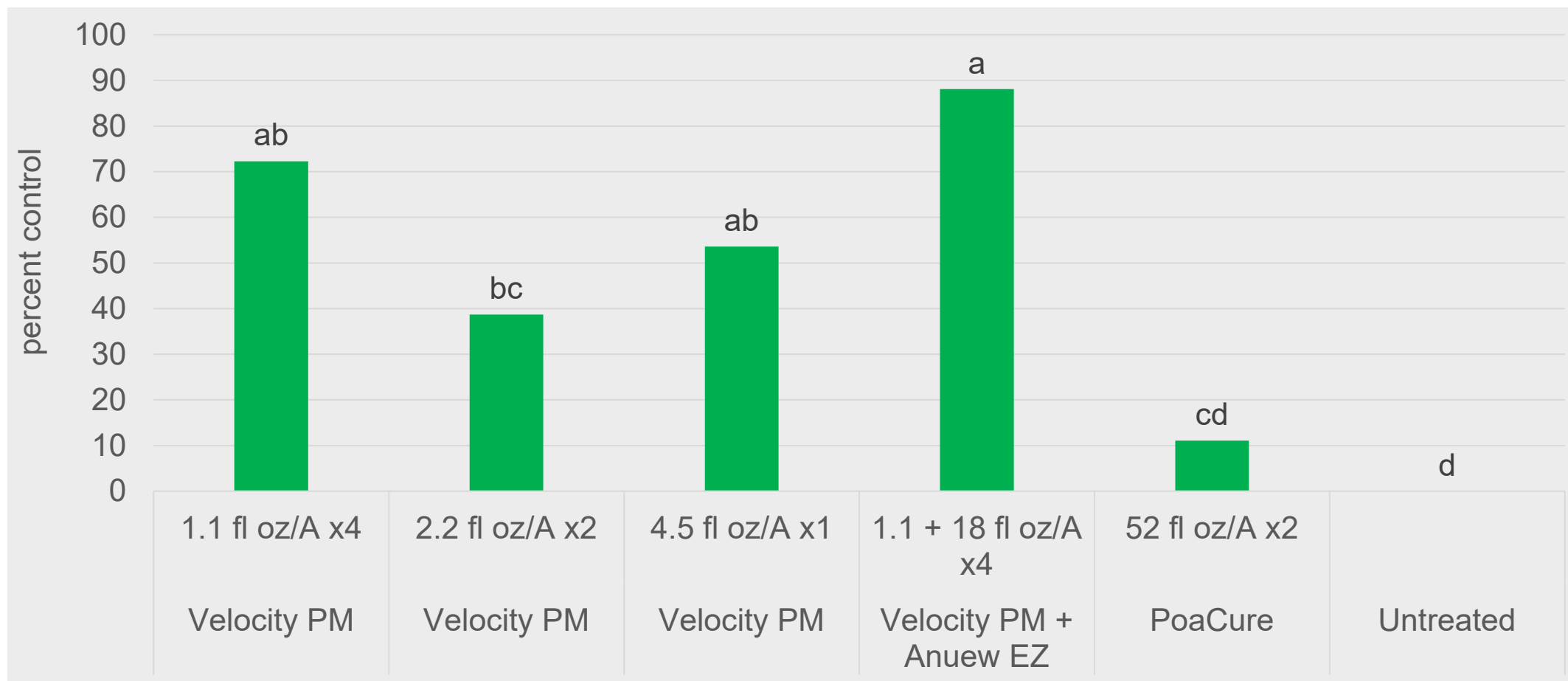
August 21 – 17 DA-A, 3 DA-B





# *Poa trivialis* Control

October 19, 2023 – 76 DA-A





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## Lawns and Athletic Fields: A Simple, Effective Program

1. Safe in tall fescue, perennial ryegrass, and fine fescue.
2. Some safety in Kentucky bluegrass but depends on variety.
3. Can be applied to dormant Bermudagrass and overseeded Bermudagrass.
4. 2.25 fl oz/A applied twice 14 – 21 days apart.
5. Any interseeding can take place 10 days after the last application.
6. Do not apply on overseeded dormant Bermudagrass until 30-60 days after emergence. Use lower rates when applying earlier in this day-range.



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## Broadleaf Weeds on the Label

Dandelion

Chickweed

Clover

Plantain

Henbit

Woodsorrel

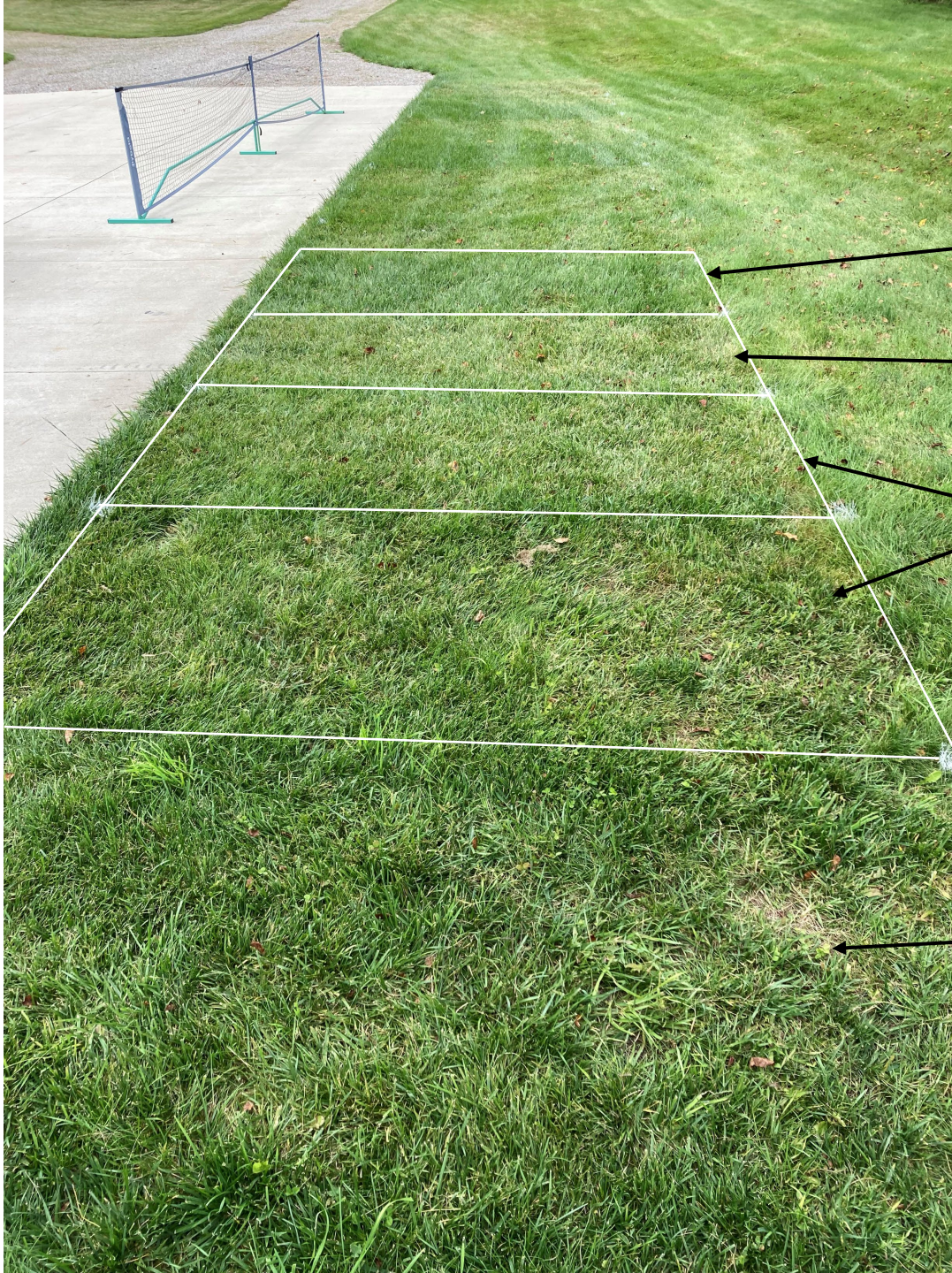
Lawn Burweed

Parsley-Piert

Swinecress

*Yellow Nutsedge*





## Tall Fescue

App: August 31, 2023

Photo: September 16, 2023

Untreated

Velocity PM, 10 fl oz/A

Velocity PM, 5 fl oz/A

Velocity PM, 2.25 fl oz/A (preferred rate in lawn-height turf).