

Moss Control:
What Has Worked,
Doesn't Work,
and Might Work

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# What will work?

















#### But, even these don't always work...













#### **Know Your Enemy!**

- Usually Bryum argenteum (Silvery thread) in turf
- Non-vascular
- No roots
- Perennial
- Sexual and asexual spread





# What hasn't worked?

Most of our current chemicals will not do anything to directly control moss!



#### **Moss Chemical Control**

Very few products labeled to have any effect on moss

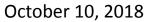
No current evidence PGR programs have any effect

 Some current options have potential to decrease moss, but may also harm turf



#### 2 Apps of Tenacity @ 5 fl oz/acre







November 5, 2018



# What has worked?

With moss, what has worked usually translates to "What might work" in many cases



#### Chemical Options Promoted for Moss Control

- Quicksilver Herbicide
- Junction Fungicide\*
- TerraCyte Pro Algaecide / Fungicide\*
- Baking Soda\*
- Iron Sulfate Products
- Soap Products\*





#### 3 Apps of Junction @ 5 fl oz/1000 ft<sup>2</sup>



January 28, 2019



#### Quicksilver

#### Category 2: Used as a stand-alone product for silvery thread moss control:

QuickSilver T&O Herbicide may be used for burndown and control of silvery thread moss (*Bryum argenteum*) occurring on lawns and golf course greens and tees consisting of bentgrass and hybrid bermudagrass. To control silvery thread moss, apply QuickSilver T&O Herbicide at a rate 6.7 fluid ounces of product per acre (0.154 fluid ounces per 1000 square feet) followed by a second application in two weeks at a rate of 6.7 fluid ounces/acre.

#### Control over longer periods:

If necessary, applications may be repeated every two weeks at a rate that is no less than 2.0 fluid ounces per acre (0.046 fluid ounces per 1,000 square feet) and no more than 6.7 fluid ounces/acre to control moss that has reestablished, as long as the annual maximum rate of 0.40 lb a.i./acre per year is not exceeded.

Use a non-ionic surfactant in the spray mix at a rate of 0.25% volume/volume. Follow all adjuvant manufacturers use guidelines.

Do not tank mix with other pesticides for silvery thread moss control. Application to bentgrass or hybrid bermudagrass turf that is under stress due to extreme high (>90°F) or low temperatures, disease infection, insect infestation or extreme high or low moisture conditions may cause transitory yellowing. *Poa annua* may be damaged at rates greater than 2.0 fluid ounces per acre.

Most creeping bentgrass and hybrid bermudagrass varieties are tolerant to QuickSilver T&O Herbicide applications; however, not all varieties of creeping bentgrass and hybrid bermudagrass have been fully evaluated. When applying QuickSilver T&O Herbicide to creeping bentgrass varieties other than Penncross or Crenshaw or hybrid bermudagrass, it is recommended to first confirm tolerance by making an application to a small test area.

Cultural practices that favor the establishment of healthy bentgrass or hybrid bermudagrass will also help to displace moss that is suppressed by the QuickSilver T&O Herbicide treatment.



#### **Cultural Practices**

- Fertilization Liquid vs granular
- Irrigation Reduce frequency, improve drainage, reduce shade
- Mowing Height Increase
- Aerification?
- Verticuting?
- Topdressing?



# What about mowing intensity?



### April 16, 2018





#### August 31, 2018





#### April 16, 2018





#### August 31, 2018





#### Clean-up lap?





#### 2018 UK Mowing Study

- 4 Mowing Treatments
  - 3 Days, 1 Direction
  - 3 Days, 2 Directions
  - 5 Days, 1 Direction
  - 5 Days, 2 Directions
- All with and without Quicksilver @ 2 fl oz / acre every 3 weeks



#### Quicksilver @ 6.7 fl oz/acre



October 10, 2018 (2 Apps)



January 28, 2019 (3 Apps)



#### 2018UK Mowing Study

- Over the season, mowing 5 days in 2 directions significantly worse than any other combination other than 3 days, 2 directions
- While typically not significant, addition of Quicksilver resulted in less moss for all mowing combinations
- 3 days in one direction with Quicksilver finished with lowest average moss at <1% (Worst: 5 days, 2 direction @ 22%)</li>
  - Started at 30%



#### What's a manager to do?

Maintain a dense, healthy turf

# University of Kentucky.







#### What's a manager to do?

- Maintain a dense, healthy turf
- Start corrective measures as soon as moss is observed
- Hand removal to start?
- Maintain a control / minimization program
  - Not a quick fix









#### More Information from GCSAA



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Announcements

Dealing with Moss on Putting Greens 2017 - On Demand



Author Start Date Duration Fred Yelverton, Ph.D. 9/21/2017 90 Minutes

Progress

#### Description

Silvery Thread Moss (Bryum argenteum) has become a serious problem on many golf course putting greens. Join Fred Yelverton, Ph.D., for this 90-minute webinar to learn management practices that can reduce the invasion of this weed. Is it coincidence that the spread of moss across the world has coincided very closely with a decrease in mowing heights on putting greens? Why is moss infecting not only bentgrass but also bermuda and *poa annua* greens? Get answers to these questions and some practical tips you can use on this ancient, simple organism.

Original presentation date: Nov. 30, 2017

You will need to complete this Course before you can write a review.



#### Questions?

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