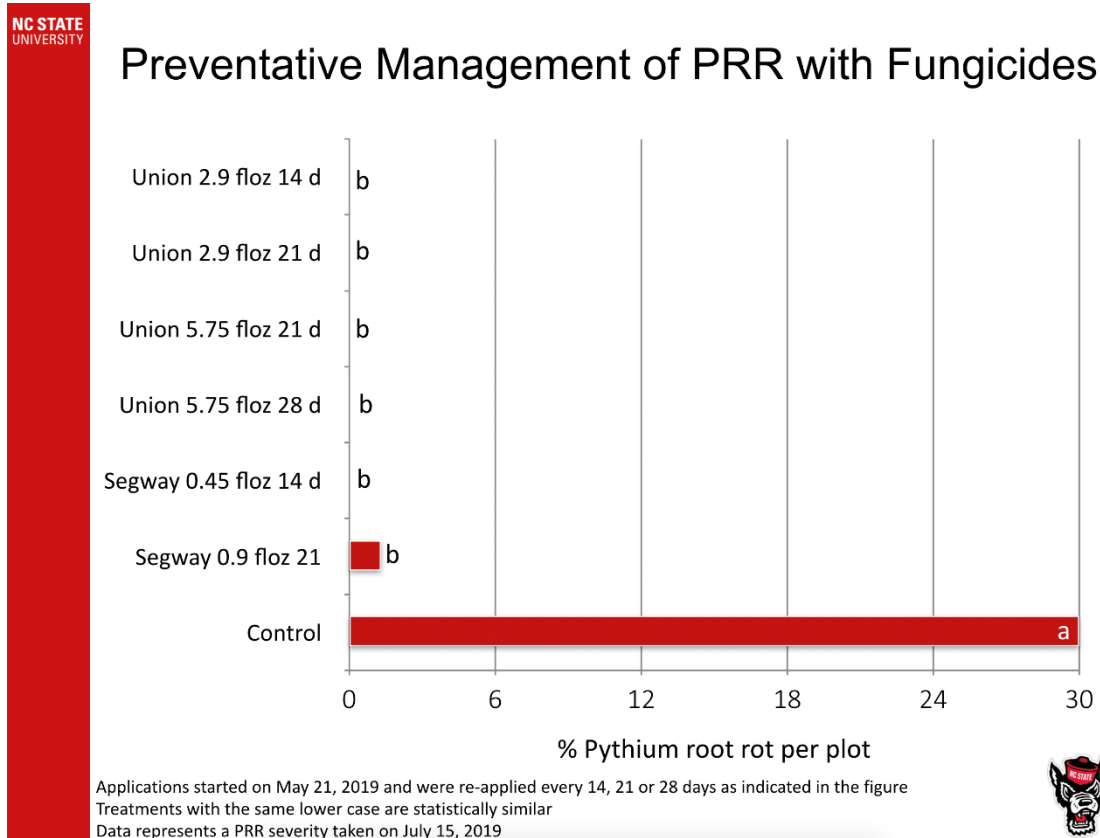


# Are You Pythed Off at Pythium Root Rot?

— Written By [Lee Butler](#), Extension Coordinator, Entomology & Plant Pathology, NC State University

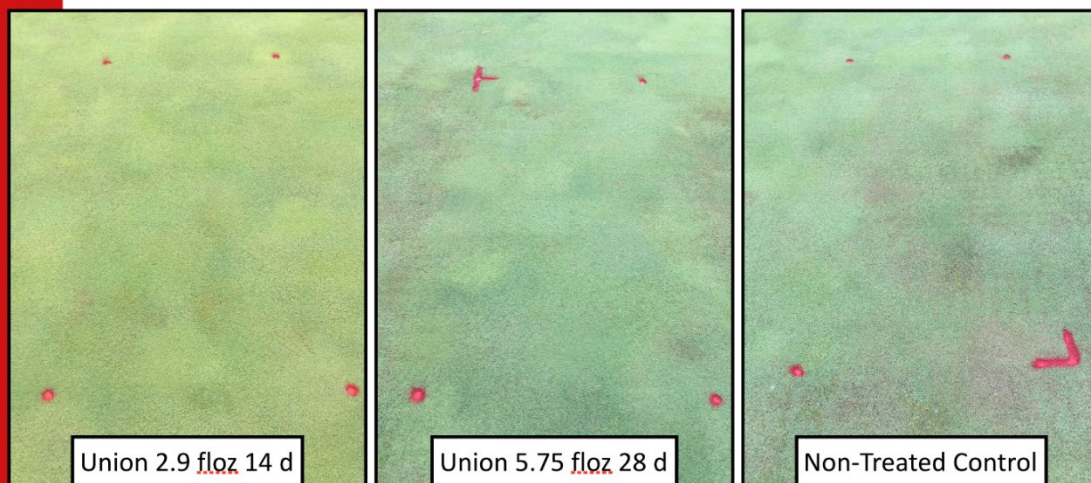
— By [Jim Kerns](#), Professor & Extension Specialist, Turfgrass Pathology, NC State University / Lee Butler / Halle Hampy

You have all heard that an ounce of prevention is worth a pound of cure. This is especially true when pathogens attack turfgrasses during the most stressful growing times of the year. For example, when diseases occur in cool-season grasses during the summer months, it can be challenging for the turfgrass plants to grow out of the damage, even when the most efficacious fungicides have been applied. This can be frustrating for growers because they feel like applications were ineffective. Furthermore, we hear stories of growers who have applied multiple fungicides over a few day periods and who are likely confused about which product exactly worked, as they often assume it was the most recently applied product. Based on the research below, it could have been one of the earlier products applied and patience was not a virtue of the grower.



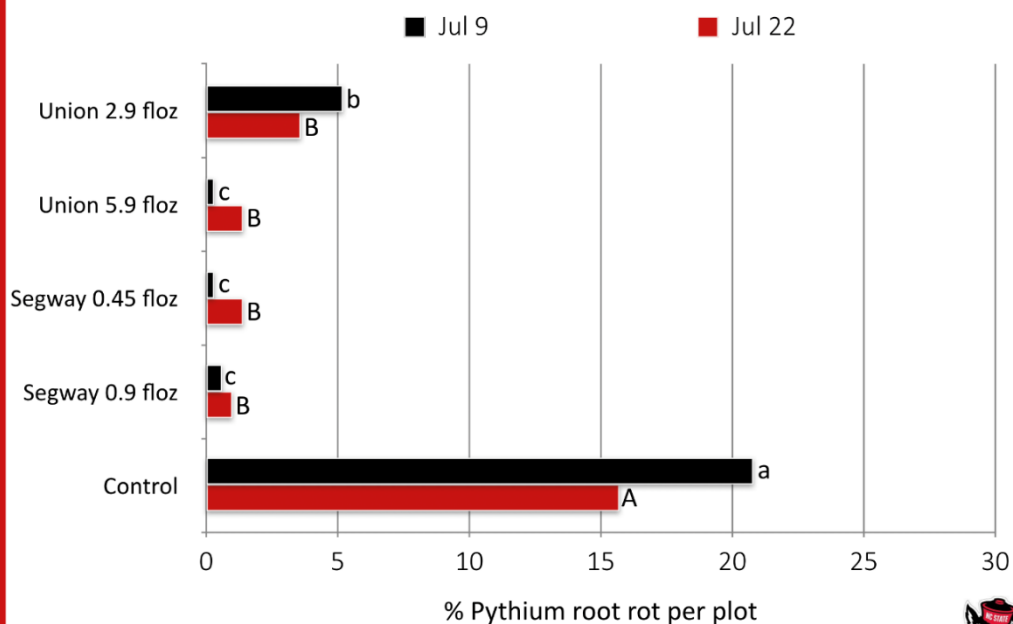
*All products applied, regardless of rate and interval, were effective at preventively controlling Pythium root rot.*

## Preventative Management of PRR with Fungicides



*Photos of plots treated preventatively with Union at the low and high rate on 14 and 28-day intervals versus the non-treated control.*

## Curative Suppression of PRR on a Creeping Bentgrass Putting Green



Applications started on June 25, 2019 and re-applied on July 10 and July 24  
Treatments with the same lower case and upper case letter are statistically similar



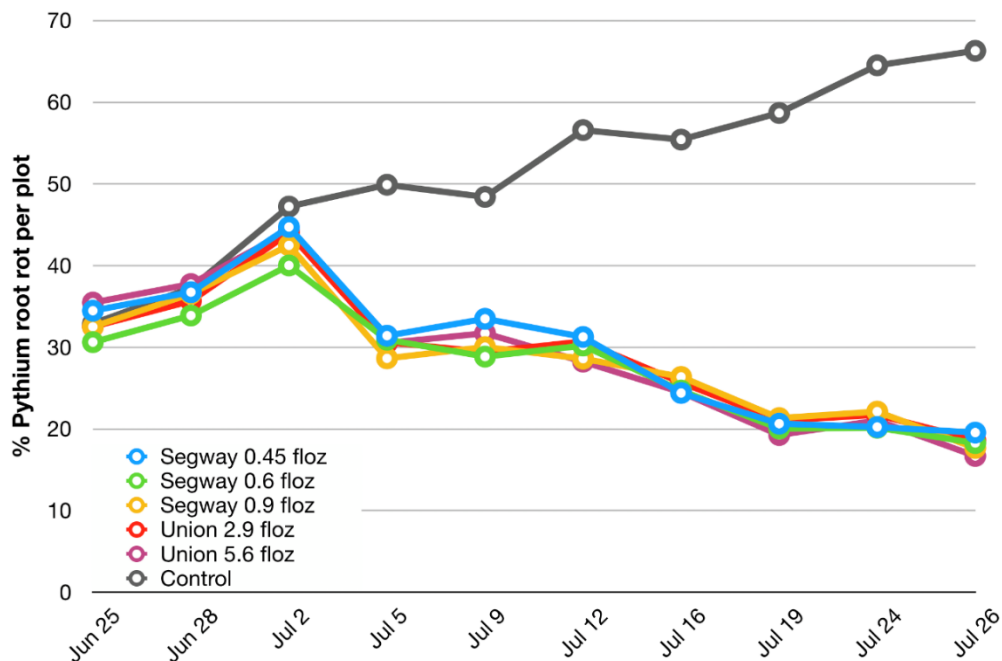
*Even though Pythium root rot was eventually suppressed by curative applications, all products regardless of rate were unable to heal 100%.*

# Curative Suppression of PRR on a Creeping Bentgrass Putting Green



*Photos of plots treated curatively with Segway and Union versus the non-treated control. Note there are still Pythium root rot symptoms in treated plots.*

## Curative Suppression of Pythium Root Rot in 2019



Disease severity was measured with the point-intersect method  
Application dates for all treatments were Jun 25, Jul 10, Jul 24

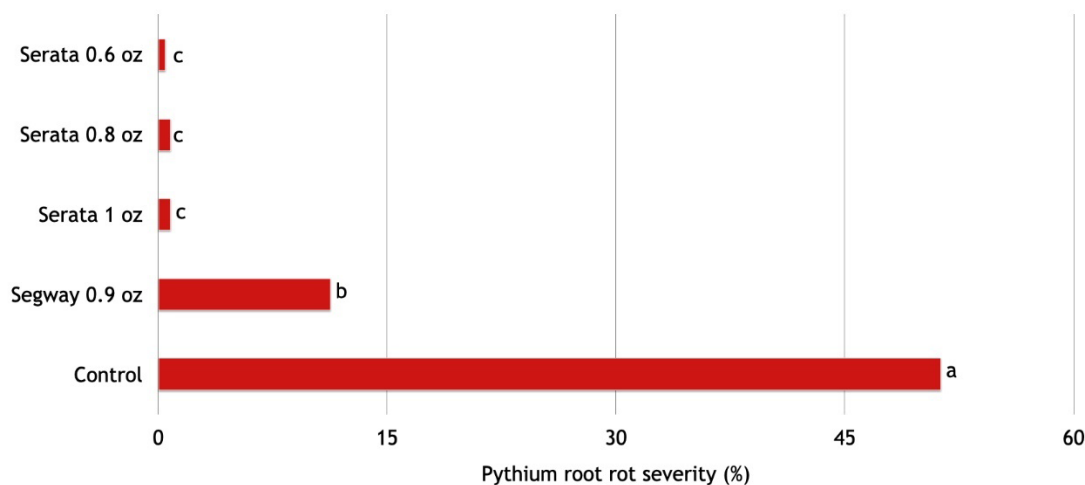


*Curative applications of all products took 1 week before symptoms started to decline and continued to slowly heal over the next several weeks and never fully recovered. This was in an extreme situation with*

high disease pressure and unfavorable growing conditions for recovery, which is often typical of NC summers.

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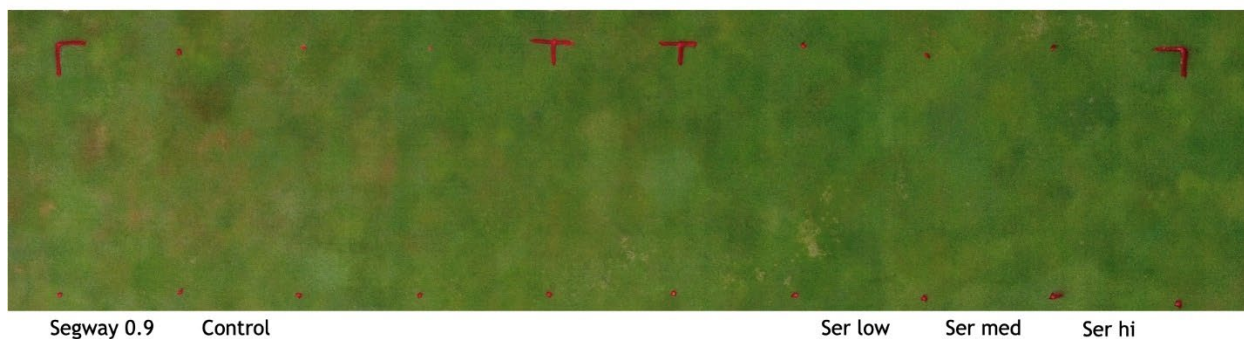
## FMC Pythium Product



*Pythium root rot control with FMC's newest fungicide Serata (picarbutrazox), which is a brand new mode of action. Note that a rate response was not observed in this trial and the labeled high rate is 0.8 oz.*

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## FMC Pythium Product



*Pythium root rot suppression in a research trial illustrating Serata's efficacy. The damaged turf in the low rate Serata plot is dollar spot and not Pythium root rot.*



*Suppression of Pythium blight in perennial ryegrass using Serata and Segway. Due to the intense pressure, typically only the high rate performs well.*

Starting a Pythium root rot program when soil temperatures are consistently above 65F should be sufficient in preventing Pythium root rot. A rotation of Segway and Serata every 2-3 weeks should be sufficient to suppress Pythium root rot all season long. The low rates of each are most effective allowing for 6 applications of Segway and 4 applications of Serata per the labels. This is a strong rotation because they are separate modes of action. You can also rotate other Pythium products such as Subdue, Banol, etc. in your program if needed. If disease happens to develop, do not expect curative applications to provide immediate suppression of the disease. As with controlling any disease, a lot of recovery is heavily dependent on growing conditions, i.e., Mother Nature. If the weather is favorable for turfgrass growth, fungicides will appear to work faster than when conditions are not favorable.