

Tall Fescue Seed Inhibits Clover Infestation

A research group in Arkansas investigated the influence of germinating seedlings of tall fescue (*Festuca arundinacea*) on the growth and development of several clover species. This work was conducted in a forage management situation with a forage type tall fescue cultivar and five clover species including white clover (*Trifolium repens*).

Standard methods of determining the allelopathic effects of one species on another were utilized, i.e., extracts of one species were introduced into pots where the weed species was growing. This was not conducted under field conditions. Still, this is not the first report of allelopathy with tall fescue species. Several years ago another research group in Arkansas identified the influence of turf type tall fescue cultivars on crabgrass infestation. No peer reviewed report is available from those studies.

Allelopathy is the influence of one species on the growth of another species. This influence can be physical, as in the shading of light or being under debris, or it can be chemical where one species exudes a chemical that alters the growth of another species. This research on tall fescue identified a subtle effect of endophyte-infected tall fescue on the growth of clover. As concern over the use of pesticides grows, an improved understanding of these types of plant interactions will be essential to maintaining high quality, functional turf stands.

(From: T.L. Springer. 1996. *Allelopathic Effects of Germination and Seedling Growth of Clovers by Endophyte-Free and Infected Tall Fescue*. *Crop Science* 36:1639-1642.)

Short Cutts

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be a four hour session with political consultant Edward Grefe discussing strategies for organizing a grass roots movement to influence pesticide policy. Brian Detzler will cross the border from Canada to discuss how he reduced pesticide use 98%, improved quality and reduced costs for the city of Waterloo parks system. Finally, Neil Diboll, an internationally recognized expert who is widely quoted in *Horticulture* and *Better Homes and Gardens* on low maintenance meadow and prairie landscapes, will offer a half day session.

Seed Priming

Turfgrass establishment from seed is both the most critical time in the life of a stand and also the hardest to control the many variables associated with success. Germination time, seedling emergence and seedling development all influence the species and possibly the cultivars that will be selected. Kentucky bluegrasses have been difficult in this vein resulting from their extended time of establishment (up to 4 to 6 weeks). Therefore, seed priming, which is a preplant treatment that alters the hydration process of germination and subsequently reduces the establishment time, is being investigated.

Seed priming can be accomplished using an osmoticum such as salt or polyethylene glycol (PEG), or through solid matrix priming (SMP) with compounds that have a high water holding capacity such as soft coal, leonardite or sphagnum moss. An experiment was conducted at Penn State University to investigate the viability of SMP as a means of enhancing cool-season turfgrass (bluegrass, ryegrass and tall fescue) establishment. Field experiments indicated that success of SMP treatment was dependent on species and cultivars. Still, the researchers concluded that SMP seed could be desirable under cool periods when seedling emergence would be reduced or for quick establishment.

In a separate experiment conducted on Kentucky bluegrass, SMP seed did not directly increase seedling growth rate, however, seedlings were larger. Again, this could be desirable for enhanced establishment under suboptimal conditions.

(From: I. Yamamoto, A.J. Turgeon, and J.M. Duich. 1997. *Field Emergence of Solid Amatrix Primed Turfgrasses and Seedling Emergence and Growth of Solid Matix Primed Kentucky Bluegrass Seed*. *Crop Science* 37:220-229.)

New this year is the Early Bird Session on Wednesday from 6:30 to 8:00 am. The conference committee headed by Jon Fik of Hobart and William Smith College works for years in advance to bring the finest education in the world to New York State. The conference will be held from Tuesday, November 4 to Friday, November 7. For more information contact the NYSTA office at (800) 873-8873.

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Scanning the Journals

A review of current journal articles

Research on tall fescue identified a subtle effect of endophyte-infected tall fescue on the growth of clover.

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