

Current cold should slow germination but have little effect on seeding success**April 14, 2014**

Most golf courses with winterkill damage are either currently seeding or have already seeded damaged areas. The cold and wind over much of Nebraska on Sunday and early this week will slow germination, but will likely have little effect on seeding success. The precipitation in the form of rain/hail/snow likely provided enough moisture to limit desiccation of seedlings from the windy conditions and should enhance germination. However, soil temperatures dropped significantly with dropping air temperatures thus slowing germination. Depending on cultivar, germination of perennial ryegrass starts around 45F and reaches a peak at 54F in the laboratory (Zhang et al., 2013). Since seed is essentially at the soil surface, these temperatures are required at the soil surface.

Literature Cited:

Zhang, H., C. R. McGill, L. J. Irving, P. D. Kemp, and D. Zhou. 2013. A modified thermal time model to predict germination rate of ryegrass and tall fescue at constant temperatures. *Crop Sci.* 53(1):p. 240-249.

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Figure 1: September 2011 picture of perennial ryegrass overseeded to increase density and diversity in a primarily Kentucky bluegrass fairway.



Figure 2: Same fairway pictured in April 2014 after winter desiccation killed the perennial ryegrass strips.