

TURFGRASS REESTABLISHMENT TECHNIQUES FOLLOWING WINTERKILL**Erica N. Titus, Kevin W. Frank, and Joseph M. Vargas, Jr.****Abstract:**

The general loss of turf during winter is referred to as winterkill. Many cultural and environmental factors influence the prevention and occurrence of winterkill. Due to the scattered kill patterns re-seeding can prove difficult, although it is the primary technique for recovery. The objectives of this study are to determine the effect of turf species and fertilizer and protective cover program on reestablishment after winterkill. The experimental design is a three cultivar/species by two nutritional programs by two cover factorial with three replications. The study simulated winterkill by the application of non-selective herbicide in spring 2006. Once weather conditions permitted the damaged greens were seeded with creeping bentgrass cultivars A4 and Providence. Annual Bluegrass seedheads were collected from nearby putting green by collecting clippings following mowing. The clippings were then spread on the plots to facilitate germination. Prior to seeding a vertical aerator with a Job Saver attachment was used to create indentions for the seed to germinate. Starter fertilizer (19-25-5) was applied at 1.0 lb.N/1000ft² at seeding and light topdressing applied to all plots. Starting two weeks after seeding there will be two fertilizer treatments: granular applied at 0.3 lb.N/1000ft² of starter fertilizer (19-25-5) every three weeks, and liquid spray of water dissolved Urea (46-0-0) applied weekly at 0.1 lb.N/1000ft². Reestablishment of plots will be assessed using visual estimates and computer analysis by taking pictures and using Sigma Scan digital imaging software. Visual quality measurements will also be recorded as well as time of seedling emergence and days to complete cover. Results will be presented.

PLANT NUTRIENT ABSORPTION UNDER FOLIAR FERTILIZATION**Tim Butler and Kevin Frank**

There has been a large emphasis on the use of foliar feeding in turfgrass management in recent years. Some turfgrass managers feel that they have more control over their grass growth when using foliar fertilization and the use of fertigation as a means of applying foliar fertilizer has gained publicity. However, little scientific information is available on the amount of nutrients that are absorbed by the plant through foliar fertilization compared to the total amount of fertilizer applied. This experiment was conducted in conjunction with Professor Roch Gaussoin, University of Nebraska and Professor Haibo Liu, Clemson University to study the amount of foliar fertilizer absorbed over time on different turfgrass stands.

On May 2nd, 2006 separate foliar fertilizer treatments were applied to annual bluegrass and bentgrass swards. The fertilizer treatments consisted of a Grigg Brothers program treatment and an Andersons 20-20-20 treatment. Each treatment was applied every two weeks. A control treatment was also used, which received no nutrients. Plot size measured 6ft x 4ft. The green was mowed daily at a height of 3.18mm. On two foliar application dates (late spring and mid summer), the time of each treatment application onto the treatment plots was recorded as "time zero" to establish start time in each treatment in each replication. Approximately 60 minutes after application, cup cutter samples measuring 75mm x 75mm were taken and 250mls of distilled water was used to wash the leaves from each sample into wide mouthed collection bottles. Three cup cutter samples were taken per replication. The cups were then replaced and red flags were used to mark the areas that had been sampled. This process was repeated at approximately 360 and 720 minutes after application. On both sampling time, samples were collected from the control to establish baseline levels of nutrients on the leaf surface of untreated plots.