

showed that applied Dollar at high concentration (10^7 CFU/cm²), Tx-1 sunscreen mixture and the strain 10TC30 provided promising disease control on the field study. Population sizes of the treatments were monitored, and results demonstrate the improved percentage of survival of Tx-1 with the protection of sunscreen.

Establishment and Management of Naturalized Secondary Roughs

Aaron Hathaway, Dr. Kevin W. Frank, and Jeff Bryan

Naturalized secondary roughs have become more common on Michigan golf courses over the last 20 years. Whether designed by the architect, or implemented by existing golf courses, these 'out-of-play' areas now appear on all styles of golf courses. Theoretically, these areas require fewer inputs than finely maintained primary rough. However, we have learned that they do require some inputs in order to look and perform as desired. Research at MSU is exploring ways to most effectively and efficiently establish these areas and various approaches to maintaining them year after year. Plots were established by planting either fine fescues or prairie species; or by allowing existing primary rough to grow with fewer inputs. Weed control treatments will include preemergence and postemergence herbicides, burning, and periodic mowing. Results from this research will directly benefit golf course superintendents in Michigan, helping them maintain naturalized secondary roughs with the right balance of aesthetics, inputs, and playability.

Michigan Turfgrass Environmental Stewardship Program

Dr. Kevin W. Frank

The Michigan Turfgrass Environmental Stewardship Program (MTESP) uses a series of self assessment modules to help golf courses evaluate their level of surface and groundwater protection on their entire property. The program, established in 1998, has helped nearly 300 golf courses create an environmental action plan that prioritizes environmental protection activities for the golf course properties. Over 100 golf courses have completed their action plans and achieved certification in the program. There are now 11 modules in the program, with two additional modules currently under development. The GAM has played an important role in the development, promotion, and support of the MTESP.