



TURF AX™

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CULTIVAR GENETIC INTEGRITY:

An important question that needs to be asked is whether the genetic integrity of individual cultivars that are vegetatively propagated is being retained. Of especial concern are the older, nonproprietary cultivars. The original grass breeder involved in the development of a cultivar is expected to assume responsibility for retaining the long-term integrity of a cultivar that will function as a reference base and a reliable breeders source of vegetative plant material for use by commercial sprig and sod growers.

An example of what can happen is as follows: Toronto creeping bentgrass (*Agrostis stolonifera* var. *stolonifera*) was released in 1936. Following World War II it became the preferred cultivar of creeping bentgrass for use on putting greens across the northern United States due to its fine texture, distinct dark green color, and good shoot density. In the early 1960's controversy arose among stolons producers as to just who possessed

the original "Toronto" creeping bentgrass. As a young Assistant Professor I decided in 1965 to resolve this issue. Stolons were submitted by seven different bentgrass producers scattered from coast to coast across the United States. In addition, stolons from the original release source maintained by the USDA in Beltsville, Maryland were obtained. All were planted under replicated putting green conditions.

Subsequent assessments revealed that among the seven Toronto creeping bentgrass cultivars evaluated each was distinctly different from the others. Equally significant was that original source of creeping bentgrass from the United States Department of Agriculture in Beltsville, Maryland was the poorest of the eight bentgrass sources being evaluated. This illustrates what can happen over a thirty-year period.

The question that needs to be raised is whether the same thing may have happened with one or more of the warm-season turfgrass cultivars, particularly within the bermudagrasses. Tifgreen and Tifway were released in 1956, Texturf 10 in 1957, Midway and Tifdwarf in 1965, and Santa Ana in 1966. These cultivars have been commercially available and propagated for 30 to 40 years. Has the same genotype variance developed within one or more of these cultivars over the years while grown by the various sod and sprig producers around the United States? Will the particular cultivar you are purchasing behave as described in the research with the original cultivar source material? Also, has a similar genetic variance occurred in some of the older seeded cultivars as well?