



# TURFAX™

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## The Art and Invention Era in the Early Evolution of Turfs—1830 to 1952

James B Beard

A paper summarizing the key early inventions and art-related developments in the evolution of turfgrasses has not been addressed. Thus, over the past two decades this author has spent considerable time in the major libraries in the United States and the United Kingdom, including the Royal Horticultural Society, Kew Gardens, British Museum, Victoria and Albert Museum, and various Sports Association libraries. Through extensive study of the limited literature from a large number of unrelated writings over hundreds of years, this author has assimilated and presents the following chronology of key turfgrass developments in the early years, from 1830 to 1952. The criteria for their selection included the impact on all types of turf use, and not just one segment such as golf turf.

The evolution of turfs as we know them today occurred in association with animal agriculture in climates favorable

for grass growth, especially rainfall and temperature. The earliest significant uses of turfs for lawns were in the United Kingdom, where the rainfall distribution throughout the year was reasonably good and the moderate temperatures favored the growth of cool-season turfgrasses, such as *Agrostis*, *Festuca*, *Lolium*, and *Poa*. In addition, the grazing of sheep, with close-grazing mouthparts, was a significant agricultural activity throughout the countryside.

The key advances that furthered the use of turfgrasses involved inventions and developments achieved through trial-and-error activities, which is termed the art of turfgrass culture. Twelve developments that highlighted the turfgrass discovery and invention era are summarized in Table 1, and are discussed in the following sections.

## EVENT NO. 1—REEL MOWER

For years turfed areas were cut to a relatively uniform height either by the hand scythe or by a hand sickle in the case of closely maintained turf areas that were cut more frequently. The leaves of grasses were best cut by the scythe or sickle when the grass was wet, such as during early morning dews or after rains. This was a very laborious, time-consuming activity. Thus lawns of even a reasonable quality were limited primarily to wealthy estate owners. This started to change in 1830 with the invention of the reel mower by Edward Beard Budding, a textile engineer of Stroud, Gloucestershire, England. This first, manually pushed reel mower was more cost-effective, which allowed the opportunity for middle-class residents to maintain residential and village green turfs, which enhanced their quality of life. The original 1830 leaf cutting design of the Budding reel mowers continues to be used to this day—more than 170 years later. Also, it should be noted that one of the major developments in agriculture was the invention of the McCormick reaper. This occurred more than ten years after the development of the Budding reel mower, with a number of the design features of the McCormick reaper most probably having been derived from the earlier Budding patent.

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