

HISTORY OF TURFGRASS EQUIPMENT AND IRRIGATION DEVELOPMENT

J. K. Watson
Vice President, The Toro Company
Minneapolis, MN

Development of turf and irrigation equipment closely parallels developments that improved turfgrasses, pesticides, fertilizers, cultural practices and turf facility design, which, in turn, parallel teaching, research and extension activities at our land grant colleges and universities and in industry that inter-relation will continue. The interaction of the various segments of the turfgrass industry is like a circle--with no starting point, no stopping point. It's continuous. Everybody inputs and everybody benefits. Each participant stimulates creativity and initiates new surges in the never-ending flow of information, which lead to continuous improvement.

Early on--years ago--the greenkeeper struggled for knowledge to improve the lot of what is today the superintendent. And, because of his desire to excel and to produce better and higher quality turfgrass, all available knowledge and experience were applied to expand the art and make turfgrass culture the science it is today. Through the organizations of the superintendents, as well as the various golf and golf related associations along with the individual golfer, pressure was exerted to refine information and knowledge and expand their availability. All parts of the industry react to these pressures, resulting in public, private, and industrial financial support for students, for research and for teaching and extension activities. This has occurred in the past and this is true today--perhaps to an even greater extent. The need for this process to continue has never been greater.

This closed-circle partnership is unique; and, as much as any one thing has been responsible for the establishment and rapid growth and development of all segments of the turfgrass industry, including equipment. The organization meeting here today is one of the oldest associations; yet, you are celebrating only your fiftieth anniversary.

Let me carry this point further. In the early days many of the ideas and suggestions for equipment development and improvements came from golf course superintendents--they still do!

The cylinder (reel) mower was developed by Edward Budding, an Englishman, in 1830. The patent was soon sold to Ransomes, who, by 1850, had produced a 1000 push type mower with baggers. The original unit was adapted from a carpet clipping or trimming machine.

By the turn of the century horse drawn fairway mowers were rather commonplace on golf courses here in the United States, in Great Britain, and throughout Europe--but--had not totally replaced sheep and still have not on a few courses in some parts of the world. In 1870 a power mower was developed that weighed 1 1/2 tons and was steam driven. It didn't last! In the mid 20's gasoline powered machines were introduced.

Most of today's major equipment manufacturers originally were in the farm tractor or implement business.

So it was with Worthington (now Jacobsen) and with my company, which, some 60 odd years ago (1918) produced our first turf maintenance machine.

In the case of Toro, it was a tractor-drawn gang mower for golf course fairway maintenance.

Up until that time we had been a manufacturer only of powered farm equipment...plowing, planting and cultivating machines, and tractors.

Some of the early officers of Toro were members of a country club, whose superintendent asked them to design a tractor to pull their fairway mowing

equipment. Fairway mowers in those days were drawn by horses.

It didn't take long for our engineers to adapt one of our tractors into a fairway gang mower. We've been in that business ever since.

It would be interesting if, through the magic of television or motion picture photography, we could look in on that country club...the Minikahda Country Club in Minneapolis... and see how the turf was maintained 50-plus years ago.

We've come a long way and we still have a long way to go. But we're getting there!

And all the improvements, all of the progress, all of the knowledge, all of the technology that have made it possible to produce and maintain high quality turf on golf courses...have been extended to other turf surfaces...

- Sports fields.

- Cemeteries.

- School yards.

- Highway rights of way.

- Grounds of office buildings, factories, hospitals and other institutions.

- And home yards.

What we have gained from all this is immeasurable in terms of...

- Aesthetics...beautiful green spaces for millions to enjoy.

- Combatting pollution...noise and dirt.

- Moderating temperatures...hot and cold.

- Providing recreation for all ages and, in the case of many major sporting events, providing thrills for millions of non-participants

 - the spectators.

That progress came about because people like you...people who work in the turf industry...recognized the importance of turf and because private industry responded to your needs with better equipment, more efficient equipment, to maintain our turf areas.

From hand push walk mowers to hydraulic driven reel triplex and gang mowers; from brass and pot metal (babbits) through quick coupling sprinklers to non-corrosive gear-driven valve-in-head sprinklers controlled by electronic clocks; from hand shovels to accurately metered sprayers and spreaderq--the list could go on and on.

The most important advantage gained from modern maintenance and irrigation equipment is productivity. One man and one machine and one automatic underground irrigation system today can do what would have required at least 10 persons 50 years ago.

Finally, from a broad, overall point of view I can say with a great deal of conviction that whatever equipment you will need in the future, the manufacturers will provide. I have enough confidence in our engineers and our manufacturers--our capitalistic society--to believe that few problems are likely to be beyond their capacity if the economic incentives are there.